

**EnviroTech**  
**Consultants, Inc.**  
5400 Rosedale Highway  
Bakersfield, CA 93308

**LINN ENERGY  
RESPONSE TO RWQCB SECTION 13267 ORDER  
POND INFORMATION AND SAMPLING RESULTS**

**POSO CREEK OIL FIELD**

**DESERT GLOW LEASE  
SECTION 14, T27S/R27E MDB&M**

**MCVAN LEASE  
SECTION 14, T27S/R27E MDB&M**

**MIDWAY-SUNSET OIL FIELD**

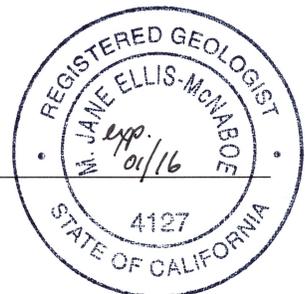
**BERRY & EWING LEASE  
SECTION 31, T31S/R24E MDB&M**

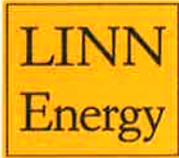
**June 12, 2015**

**Prepared by:**

**EnviroTech Consultants, Inc.**

*M. Jane Ellis-McNaboe*  
M. Jane Ellis-McNaboe, PG





NASDAQ:LINE  
NASDAQ:LNCO

LINN Operating, Inc.  
*A wholly owned subsidiary of LINN Energy, LLC*

5201 Truxtun Ave., Suite 100  
Bakersfield, CA 93309  
Phone: (661) 616-3900

June 11, 2015

Certification Statement

RWQCB Order 13267, Pond Sampling Technical Report  
Linn Energy

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

*Robert E. Bosters, EHS SUPERVISOR*  
(Name and Title)

*6/11/2015*  
Date

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ATTACHMENT A	LINN Desert Glow Ponds Map
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ATTACHMENT C	LINN Berry & Ewing Ponds Map
ATTACHMENT D	LINN Hill Ponds Map
ATTACHMENT E	Copy of RWQCB Order 13267, 1 April, 2015
ATTACHMENT F	Laboratory Analytical Report, RWQCB Identified Ponds
ATTACHMENT G	Laboratory Analytical Report, January 2015, LINN Identified Ponds, Hill Lease

## 1.0 IDENTIFICATION OF DISCHARGES OF PRODUCED WATER TO LAND

The Regional Water Quality Control Board (RWQCB) identified the following ponds on leases owned by Berry Petroleum Company, LLC and operated by LINN Operating, Inc. (LINN):

**Table 1-1: RWQCB Identified Ponds**

Oil Field	Lease	No. of Ponds
Midway-Sunset	Berry & Ewing	2
Poso Creek	Desert Glow	2
Poso Creek	McVan	2

In addition to the ponds identified by the RWQCB, LINN identified the two emergency ponds listed in the table below. The two Hill ponds received well bore fluids for one month during December 2014 and January 2015 as a result of a release.

Maps of the ponds and surrounding leases are included as Attachments A, B, C, and D.

**Table 1-2: Additional Ponds Identified by LINN**

Oil Field	Lease	Latitude	Longitude	Assessor's Parcel Number	Status	Liquids: Yes/No	Size
South Belridge	Hill	35.480736	-119.749547	085-210-24	Active	No	300'x150'x8'
	Hill	35.480156	-119.747092	085-210-24	Active	No	80'x 90'x15'

## 2.0 POND SAMPLING

Representative samples of wastewater were collected by EnviroTech Consultants, Inc. (EnviroTech) from the Desert Glow, McVan, and Berry & Ewing ponds on April 14, 2015 as required by Order 13267 dated April 1, 2015 (Attachment E).

Desert Glow Ponds numbers 1 and 2 receive different discharges. Desert Glow Pond #1 receives produced water and filter-softener backwash. Desert Glow Pond #2 receives produced water and tank drains and sand dumps. Two separate fluid samples were collected, one from each of the wastewater tank sampling ports that lead to each pond.

Pond #3 is located on the McVan lease. The fluid sample was collected by dipping a clean mason jar into the fluid and decanting the fluid into the laboratory containers. Please note that

this pond has not been active since December 21, 2010. Fluid sampled is residual from rain events and/or discharge allowed under NPDES #CA0078867, which was rescinded by the Board in May 2013 at the request of Berry Petroleum Company.

The two ponds on the Berry & Ewing lease are in series, one fluid sample was collected. The samples were collected directly from pond #2 using a clean mason jar. These ponds are concrete lined bunkers that receive fluids from vacuum truck washouts and tank drains. Water is pumped from these ponds to water treatment system, while oil is skimmed and returned to production system.

All fluid samples were decanted into appropriate sampling containers and cooled with ice for storage and transportation to the laboratory under standard chain of custody procedures. The laboratory analytical reports are included in Attachment F.

Fluid samples were collected and analyzed from the Hill ponds by LINN in January 2015; the laboratory analytical reports are included in Attachment G.

All analytical results are summarized in the summary tables in Section 3 below.

### **3.0 POND SAMPLING ANALYTICAL RESULTS**

The Desert Glow, McVan and Berry and Ewing pond samples were received by Test America Laboratories, Inc. on April 14, 2015. EnviroTech received the laboratory analytical report on June 4, 2015. The analytical results are summarized in the following tables; complete laboratory reports are included in Attachment E.

The Hill pond samples were collected by LINN on January 7, 2015. The samples were received by BC Laboratories on January 7, 2015 and analyzed. The laboratory analytical reports are included in Attachment F.

**Table 3-1: General Chemistry**

Sample ID	Date Sampled	Total Dissolved Solids	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Strontium	Alkalinity as CaCO3	Bicarbonate ion as HCO3	Carbonate as CO3	Hydroxide as OH
EPA Analytical Method		2540C_Calcd	6010B							2320B			
Units		mg/L											
Reporting limit		Reporting limits vary, see full analytical report.											
<b>Results</b>													
Berry & Ewing (Pond #4)	4/14/2015	<b>10,000</b>	<b>23</b>	<b>16</b>	<b>10</b>	<b>0.27</b>	<b>110</b>	<b>3,300</b>	<b>1.1</b>	<b>1,300</b>	<b>590</b>	<b>490</b>	<1.4
Desert Glow (Pond #1)	4/14/2015	<b>350</b>	<b>3.6</b>	<b>0.0096</b>	<b>0.03</b>	<0.020	<b>2.2</b>	<b>88</b>	<0.020	<b>140</b>	<b>170</b>	<2.4	<1.4
Desert Glow (Pond #2)	4/14/2015	<b>370</b>	<b>8.1</b>	<b>0.16</b>	<b>0.68</b>	<b>0.022</b>	<b>2.1</b>	<b>95</b>	<b>0.047</b>	<b>170</b>	<b>210</b>	<2.4	<1.4
McVan (Pond #3)	4/14/2015	<b>860</b>	<b>37</b>	<b>0.43</b>	<b>2.7</b>	<b>0.48</b>	<b>4.7</b>	<b>150</b>	<b>0.29</b>	<b>190</b>	<b>220</b>	<b>7.1</b>	<1.4
Hill	1/7/2015	<b>16,000</b>	<b>160</b>	NA	<b>130</b>	NA	<b>50</b>	<b>4,500</b>	NA	NA	<b>1500</b>	<8.2	NA

**Bold** = Analyte detected at or above minimum reporting limit.

NA – not analyzed for this compound.

**Table 3-2: Anions**

Sample ID	Date Sampled	Anions, Ion Chromatography			
		Bromide	Chloride	Nitrate as NO <sub>3</sub>	Sulfate
EPA Analytical Method		300_ORGFM_28D		300_ORGFMS	300_ORGFM_28D
Units		mg/L			
Reporting Limit		Reporting limit varies, see full analytical report.			
Berry & Ewing (Pond #4)	4/14/2015	<b>50</b>	<b>4,200</b>	<50	<b>230</b>
Desert Glow (pond #1)	4/14/2015	<b>0.97</b>	<b>68</b>	<0.50	<b>0.92</b>
Desert Glow Pond #2	4/14/2015	<b>0.80</b>	<b>43</b>	<0.50	<b>0.65</b>
McVan (Pond #3)	4/14/2015	<b>1.1</b>	<b>91</b>	<0.50	<b>58</b>
Hill	1/7/2015	<b>74</b>	<b>8,500</b>	NA	<b>86</b>

**Bold** = Analyte detected at or above minimum reporting limit.  
 NA – not analyzed for this compound.

**Table 3-3: Metals**

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead
EPA Analytical Method		6010B									
Units		mg/L									
Reporting Limit		Reporting limit varies by sample. See full analytical report.									
Berry & Ewing (Pond #4)	4/14/2015	<0.010	<0.010	<b>0.49</b>	<0.0020	<b>97</b>	<0.0050	<b>0.013</b>	<0.010	<b>0.020</b>	<0.0050
Desert Glow (Pond #1)	4/14/2015	<0.010	<0.010	<0.010	<0.0020	<b>0.93</b>	<0.0050	<0.0050	<0.010	<0.010	<0.0050
Desert Glow Pond #2	4/14/2015	<0.010	<0.010	<b>0.011</b>	<0.0020	<b>0.89</b>	<0.0050	<0.0050	<0.010	<0.010	<0.0050
McVan (Pond #3)	4/14/2015	<0.010	<b>0.043</b>	<b>0.076</b>	<0.0020	<b>0.94</b>	<0.0050	<0.0050	<0.010	<0.010	<0.0050
Hill	1/7/2015	<0.5	<b>&lt;0.25</b>	<b>2.1</b>	<0.050	<b>0.049</b>	<0.050	<b>0.0032</b>	<0.055	<b>0.0085</b>	<0.0250

Sample ID	Date Sampled	Lithium	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Vanadium	Zinc	Mercury
EPA Analytical Method		6010B									7470A
Units		mg/L									
Reporting Limit		Reporting limit varies by sample. See full analytical report.									
Berry & Ewing (Pond #4)	4/14/2015	<b>0.68</b>	<b>0.039</b>	<b>0.053</b>	<0.010	<0.010	<b>1.1</b>	<0.010	<b>0.019</b>	<b>0.048</b>	<0.0010
Desert Glow (Pond#1)	4/14/2015	<0.050	<b>0.043</b>	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.020	<0.00020
Desert Glow Pond #2	4/14/2015	<0.050	<0.020	<0.010	<0.010	<0.010	<b>0.047</b>	<0.010	<0.010	<0.020	<0.00020
McVan (Pond #3)	4/14/2015	<0.050	<b>0.055</b>	<b>0.014</b>	<0.010	<0.010	<b>0.29</b>	<0.010	<b>0.014</b>	<0.020	<0.00020
Hill	1/7/2015	<b>0.0019</b>	<b>0.021</b>	<0.050	<0.500	<0.050	<b>0.0078</b>	<0.500	<0.050	<b>0.027</b>	<0.0020

**Bold** = Analyte detected at or above minimum reporting limit.

**Table 3-4: BTEX and TPH**

Sample ID	Date Sampled	Benzene	Ethylbenzene	Toluene	Xylenes, Total	TPH as Crude Oil: Diesel and Gasoline Range Organics (GC)		
						C4-C12	C13-C22	C23-C40
EPA Analytical Method		8260B			8015B_GRO	8015B_DRO		
Units		ug/L			ug/L	mg/L		
Reporting Limit		Varies, see laboratory report			0.48			
Berry & Ewing (Pond #4)	4/14/2015	<20	<20	<b>20</b>	<20	<b>14,000</b>	<b>40</b>	<b>37</b>
Desert Glow (Pond #1)	4/14/2015	<10.0	<10.0	<b>200</b>	<10.0	<b>810</b>	<b>1.3</b>	<b>1.6</b>
Desert Glow Pond #2	4/14/2015	<2.0	<2.0	<2.0	<2.0	<1000	<b>1.7</b>	<b>2.7</b>
McVan (Pond #3)	4/14/2015	<2.0	<2.0	<2.0	<2.0	<b>55</b>	<b>7.1</b>	<b>2.6</b>
Hill	7/1/2015	<0.50	<0.50	<0.50	<1.0	NA		

**Bold** = Analyte detected at or above minimum reporting limit.

NA – not analyzed for this compound

**Table 3-5: Semi-volatile Organic Compounds**

Sample ID	Date Sampled	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
EPA Analytical Method		8270C_SIM															
Units		ug/L															
Berry & Ewing (Pond #4)	4/14/2015	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<b>19</b>	<9.6	<b>25</b>	<b>39</b>	<9.6
Desert Glow (Pond #1)	4/14/2015	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<b>1.3</b>	<0.20	<0.20
Desert Glow Pond #2	4/14/2015	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<b>0.69</b>	<0.21	<0.21
McVan (Pond #3)	4/14/2015	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
Hill	1/7/2015	<b>0.27</b>	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<b>0.97</b>	<0.10	<b>13</b>	<b>0.32</b>	<0.10

**Bold** = Analyte detected at or above minimum reporting limit.  
Reporting limit varies by sample. See full analytic report.

**Table 3-6: Radionuclides**

Sample ID	Date Sampled	Gross Alpha	Gross Beta	Radium-226	Radium-228	Uranium
<b>EPA Analytical Method</b>		9310		9315_Ra226	9320_Ra228	6020A
<b>Units</b>		pCi/L				
<b>Regulatory Threshold*</b>		15	15	--	5	20
Berry & Ewing (Pond #4)	4/14/2015	76.7 ± 87.1 <sup>U, G</sup>	<b>80.8±30.5</b>	<b>0.845 ± 0.434</b>	1.02 ± 1.77 <sup>U, G</sup>	<b>2.3</b>
Desert Glow (Pond #1)	4/14/2015	3.09±2.68	0.779±0.974	0.0735±0.104	0.173±0.393	<1.7
Desert Glow Pond #2	4/14/2015	-0.837±2.82 <sup>U, G</sup>	1.80±1.03	0.209±0.255	0.135±0.744 <sup>U, G</sup>	<1.7
McVan (Pond #3)	4/14/2015	3.79 ± 6.17	3.77±2.29	<b>0.308 ± 0.139</b>	0.229 ± 0.412	<b>1.4<sup>J</sup></b>
Hill	5/1/2015	<0.156 ± 1.65	NA	<b>3.49 ± 5.25</b>	<b>5.03 ± 4.11</b>	<b>1.2</b>

**Bold** = Analyte detected at or above minimum reporting limit.

Reporting limit varies by sample. See full analytic report.

\* Title 22, Table 6443. MCL

-- No Regulatory Threshold

\*Used total uncertainty for radionuclides.

<sup>U</sup> – Result is less than the sample detection limit.

<sup>G</sup> - The sample MDC is greater than the requested RL.

<sup>J</sup> – The result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

NA – not analyzed for this compound.

#### 4.0 INFORMATION FOR EACH SURFACE IMPOUNDMENT

The following table contains the required information for the LINN Energy ponds identified by the RWQCB. LINN Operating, Inc. is the operator.

**Table 4-1: Surface Impoundment Information**

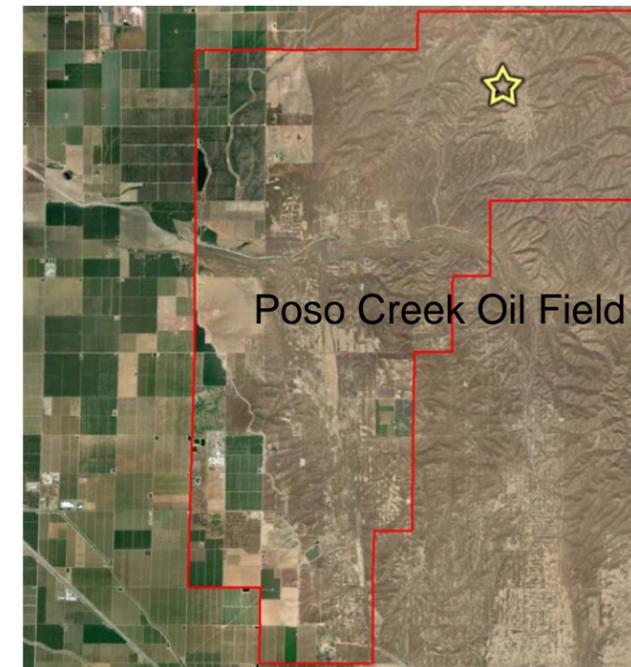
Pond Identification	Surface Impoundment Dimensions (feet)			Location (NAD 83)	Assessor's Parcel Number of the Lease	Duration of discharge (months)	Volume of wastewater discharged per year (bbbls)
	Length	Width	Depth				
Desert Glow (Pond #1)	Length	Width	Depth	Latitude:35.580890°	074-030-09	144	65,000
	92'	74'	20'	Longitude: -119.041290°			
Desert Glow (Pond #2)	Length	Width	Depth	Latitude:35.580280°	074-030-09	144	5,200
	128'	74'	16'	Longitude: -119.041346°			
	128'	74'	20'	Longitude: -119.045200°			
McVan (Pond #3)	Length	Width	Depth	Latitude:35.579916°	074-030-08	0	0
	246'	58'	16'	Longitude: -119.044526°			
Berry & Ewing #1	Length	Width	Depth	Latitude:35.09874°	220-080-21	Approximately 420 (35 years)	18,000
	36'	11'	5.5'	Longitude: -119.441251°			
Berry & Ewing #2	Length	Width	Depth	Latitude:35.098711°	220-080-21		
	36'	11'	5.5'	Longitude: -119.441219°			

ATTACHMENT A

LINN ENERGY  
DESERT GLOW POND MAP



# LINN ENERGY



Poso Creek Oil Field

## Legend



Desert Glow Lease

Desert Glow Lease Ponds

Desert Glow #1:  
Length – 92'  
Width – 74'  
Depth – 20'

Desert Glow #2:  
Length – 128'  
Width – 74'  
Depth – 16'

Prepared By:

**EnviroTech**  
Consultants, Inc.

Section/Township/Range

T27S/R27E – Section 14 MDB&M  
(NE ¼ of the SW ¼ )

**TITLE:**

Desert Glow Lease Pond

**FIELD:**

Poso Creek Oil Field

**COUNTY:**

Kern

**DRN BY:**

Kelsey Padilla

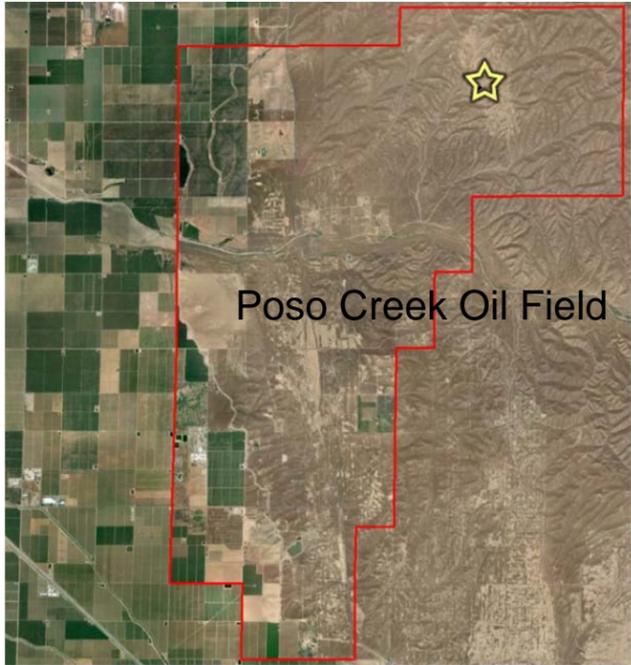
**DATE:**

May 27, 2015

ATTACHMENT B

LINN ENERGY  
MCVAN POND MAP

# LINN ENERGY



### Legend

-  McVan Lease
-  McVan Lease Ponds
- McVan Pond:  
Length – 246'  
Width – 58'  
Depth – 16'

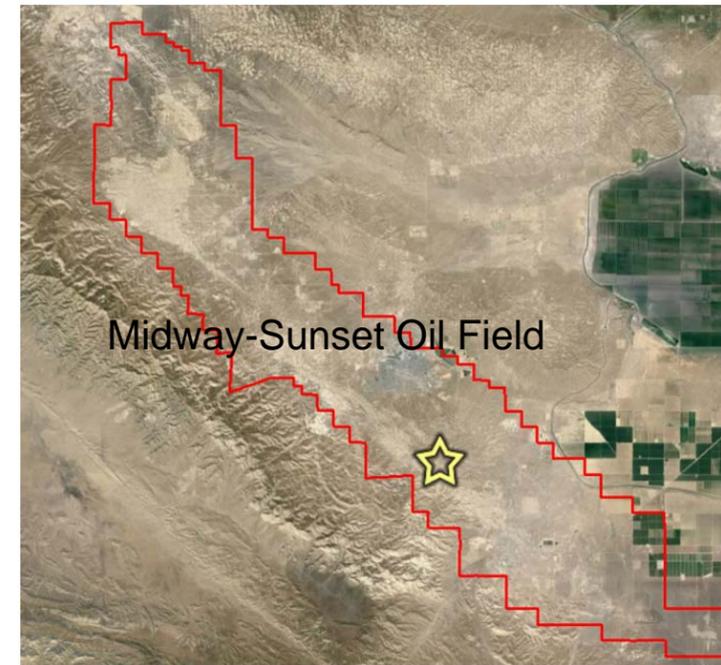
Prepared By:	<b>TITLE:</b>	McVan Lease Pond
	<b>FIELD:</b>	Poso Creek Oil Field
	<b>COUNTY:</b>	Kern
<b>Section/Township/Range</b>	<b>DRN BY:</b>	Kelsey Padilla
T27S/R27E – Section 14 MDB&M (NW ¼ of the SW ¼)	<b>DATE:</b>	May 27, 2015

ATTACHMENT C

LINN ENERGY  
BERRY & EWING PONDS MAP



# LINN ENERGY



## Legend

	Berry & Ewing Lease	Pond #1: Length – 36' Width – 11' Depth – 5.5'	Pond #2: Length – 36' Width – 11' Depth – 5.5'
	Berry & Ewing Lease Ponds		

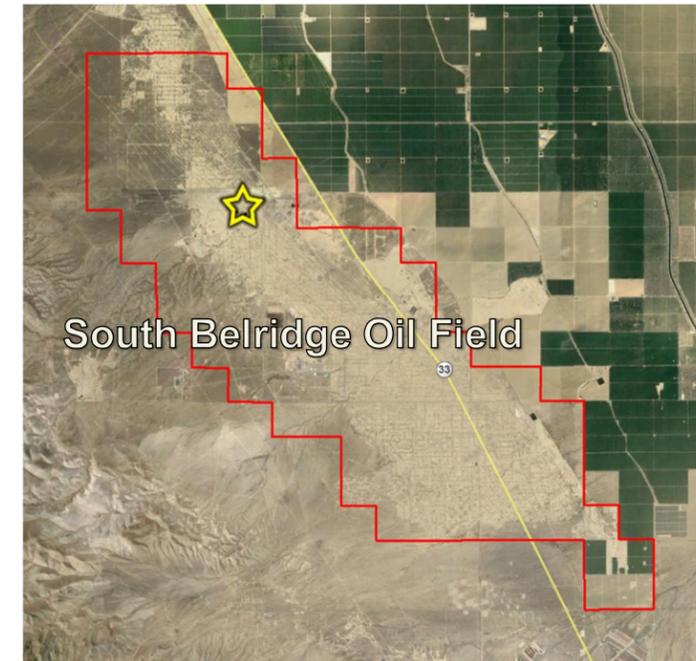
Prepared By:	<b>TITLE:</b>	Berry & Ewing Lease Pond
	<b>FIELD:</b>	Midway-Sunset Oil Field
	<b>COUNTY:</b>	Kern
<b>Section/Township/Range</b>	<b>DRN BY:</b>	Kelsey Padilla
T32S/R24E – Section 31 MDB&M (E ½ of the SW ¼)	<b>DATE:</b>	May 27, 2015

ATTACHMENT D

LINN ENERGY  
HILL LEASE POND MAP



# LINN ENERGY



## Legend



Hill Lease



Hill Lease Ponds

Hill Pond #1:  
Length – 300'  
Width – 150'  
Depth – 8'

Hill Pond #2:  
Length – 80'  
Width – 90'  
Depth – 15'

Prepared By:

**EnviroTech**  
Consultants, Inc.

Section/Township/Range

T28S/R21E – Section 19 MDB&M

TITLE:

Hill Lease Ponds

FIELD:

South Belridge Oil Field

COUNTY:

Kern

DRN BY:

Kelsey Padilla

DATE:

June 12, 2015

ATTACHMENT E

LINN ENERGY

COPY OF RWQCB ORDER 13267, 1 APRIL, 2015



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Central Valley Regional Water Quality Control Board

1 April 2015

Trent R. Rosenlieb  
Berry Petroleum Company, LLC  
5201 Truxtun Avenue, Suite 100  
Bakersfield, CA 93309

**CERTIFIED MAIL**  
7014 3490 0001 7023 0087

**CALIFORNIA WATER CODE DIRECTIVE PURSUANT TO SECTION 13267. You are legally obligated to respond to this Order. Please read this Order carefully.**

Berry Petroleum Company, LLC (hereafter Discharger) has been identified as the owner or operator of petroleum production wastewater disposal ponds (ponds). A list of the ponds (and the leases and oil fields where they are located) that the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) identifies as under your control is presented in Attachment A. Ponds for the disposal of wastewater generated during the course of petroleum production have the potential to affect the quality of groundwater (a water of the State). Groundwater underlying the areas where your ponds are located have beneficial uses as identified in the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan).

This order requires the collection and analysis of wastewater samples collected from each of the ponds listed in Attachment A to characterize the discharge. Each sample is to be analyzed for each of the constituents listed in Attachment B. These data are needed to comprehensively characterize wastewater in each pond and provide data needed to evaluate the threat to the quality of waters of the State. If more than one pond is connected in series (i.e., one pond drains directly to the next with no other source of inflow) then only the upstream pond must be sampled. This order is not intended to require the collection of duplicative data. If during the 12 months (one year) prior to the date of this order, samples required by this order have been analyzed from one or more of the ponds for the required constituents, that data can be submitted for the appropriate order requirements.

This order also requires Discharger to identify any discharge(s) of oil field wastewater to land that is not identified in Attachment A. Discharger must also collect and analyze wastewater samples in accordance with Attachment B from any additionally identified discharge to characterize the discharge.

The Central Valley Water Board's authority to require technical reports derives from Section 13267 of the California Water Code, which specifies, in part, that:

*(h) A regional Board ... in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the State within its region.*

*(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefit to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.*

The Central Valley Water Board is concerned about the potential impacts to water quality posed by the discharge of oil field produced waters in surface ponds. The technical information and reports required by this order are necessary to assess the potential threat to water quality. The need to understand the potential impacts to water quality justify the need for the information and reports required by this order. Based on the nature and possible consequences of the discharges of waste, the burden of providing the required information, including the reporting costs, bears a reasonable relationship to the need for the report, and the benefits to be obtained. Discharger is required to submit this information and reports because it is the operator of the ponds listed in Attachment A of this order.

The unauthorized discharge of waste containing oil field waste constituents to land, including unlined ponds, may result in the degradation of water quality and creates or threatens to create, a condition of pollution in groundwater. Significant concentrations of salinity (measured as TDS and EC), significant contributors to salinity such as chloride and sulfate, and boron are present in oil field wastewater. Other potential constituents such as, but not limited to, metals, radionuclides, and organic compounds pose a threat to water quality. The concentrations of these waste constituents in wastewater being discharged needs to be known to evaluate the threat. In addition, all locations where these discharges are occurring needs to be known.

Underlying groundwater can be degraded if mixed with oil field wastewater. Elevated concentrations of oil field waste constituents could impair the groundwater for municipal and domestic supply and agricultural supply uses.

**Under the prescribed authority of California Water Code section 13267**, the Central Valley Water Board directs Discharger to:

1. **By 15 June 2015**, submit a technical report containing the following information:

- A. Identification of any discharges of oil field produced waters to land, including but not limited to ponds, since April of 2014 that are not listed in Attachment A;
- B. Collect representative samples of wastewater within each of the ponds. Samples must be analyzed in accordance with the water quality analysis and reporting requirements contained in Attachment B to this Order;<sup>1</sup>

If a representative sample cannot feasibly be collected from one or more of the sources discharging to a surface impoundment(s), then a comment will need to be added to the technical report required by this Order demonstrating that collection of a representative sample from a specific source is not feasible within the required timeframe, and propose an alternative sampling procedure and expeditious time schedule for obtaining a representative sample for each source. Alternative sampling procedures and time schedules are subject to approval by the Assistant Executive Officer of the Central Valley Regional Water Quality Control Board.

- C. All available information for each of the surface impoundment(s), including dimensions (i.e., length, width, and depth), latitude and longitude, Assessor's Parcel Numbers of the lease, duration of the discharge (in months), and the volume of wastewater discharged per year.
- D. A location map that includes the following information:
  - i. All surface impoundment(s) at the Facility,
  - ii. Include the boundary lines for all leases at the Facility, and
  - iii. Legend with the name of the surface impoundment(s).

2. **By 15 April 2015**, Discharger needs to contact Dane S. Johnson of this office at (559) 445-5525 if you have received this Order and cannot collect the required samples.

---

<sup>1</sup> All previously obtained analytical data for oil field produced wastewater samples collected at the Facility, if any, with a description of the source and location for each analysis may be submitted in the alternative for re-running tests if the sample(s) was collected and analyzed within 12 months (one year) of the date of this order.

The technical report required by this Order must be submitted to the attention of:

Ronald Holcomb  
Central Valley Water Board  
1685 E Street  
Fresno, CA 93706

Based on the information submitted in the technical report, additional information or action may be required.

With the report required by this Order, Discharger shall provide under penalty of perjury under the laws of California a "Certification" statement to the Central Valley Water Board. The "Certification" shall include the following signed statement:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

The Central Valley Water Board reserves the right to issue a Notice of Violation or pursue enforcement for Discharger's activities after reviewing the documentation provided in response to this Order.

The Technical Report is to be signed and stamped by a California Professional Engineer (Registered as a Civil Engineer) or a registered California Professional Geologist. Any laboratory analyses shall be performed by an analytical laboratory certified by the State of California for the analyses performed. Submissions pursuant to this Order shall include a statement by Discharger, or an authorized representative of Discharger, certifying (as described above) that the information submitted is true, complete, and accurate.

The failure to furnish the required report, or the submission of a substantially incomplete report or false information, is a misdemeanor, and may result in additional enforcement actions being taken against Discharger, including issuance of an Administrative Civil Liability Complaint pursuant to California Water Code section 13268. Liability may be imposed pursuant to California Water Code section 13268 in an amount not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs. All discharges to unpermitted ponds should cease pending review and submission of the technical information sought by this order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with

California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 days after the date of this directive, except that if the thirtieth day following the date of this directive falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

If you have any questions regarding this matter, please contact Doug Patteson of this office at (559) 445-5577 or at [doug.patteson@waterboards.ca.gov](mailto:doug.patteson@waterboards.ca.gov).



Clay L. Rodgers  
Assistant Executive Officer

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cc: Julie Macedo, Office of Enforcement, State Water Resources Control Board, Sacramento  
Mike Toland, California Division of Oil, Gas, and Geothermal Resources, Bakersfield

**ATTACHMENT A**

The following table contains the names of oil fields and lease(s) and the corresponding number of ponds that the Central Valley Water Board has identified as active and under your control:

<b>OPERATOR</b>	<b>OIL FIELD</b>	<b>LEASE</b>	<b>NO. OF PONDS</b>
Berry Petroleum Company, LLC	Midway-Sunset	Berry & Ewing	2
	Poso Creek	Desert Glow	2
		McVan	2

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**ATTACHMENT B**Water Quality Analysis

Wastewater samples collected from the ponds shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program using currently applicable United States Environmental Protection Agency-approved analytical methods for water for the following:

- A. Total dissolved solids;
- B. Metals listed in California Code of Regulations, title 22, section 66261.24. subdivision (a)(2)(A);
- C. Benzene, toluene, ethylbenzene, and xylenes;
- D. Total petroleum hydrocarbons as crude oil;
- E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorine, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene);
- F. Radionuclides listed under California Code of Regulations, title 22, Table 64442;
- G. Major and minor cations (including sodium, potassium, magnesium, and calcium);
- H. Major and minor anions (including nitrate, chloride, sulfate, carbonate, bicarbonate, and bromide);
- I. Trace elements (including lithium, strontium, boron, iron, and manganese).

Reporting Requirements

Water Quality information shall be submitted in a technical report that includes at a minimum:

- A. Site plan(s) with the location(s) of where the samples were collected;
- B. A description of how the samples, representative of the pond contents, were collected;

Table(s) of analytical results organized by pond number with the data also submitted electronically as an Excel spreadsheet.

ATTACHMENT F

LINN ENERGY  
LABORATORY ANALYTICAL REPORTS

DESERT GLOW

MCVAN

BERRY & EWING

LABORATORY ANALYTICAL REPORT

DESERT GLOW

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-107073-1

TestAmerica SDG: LINN, Poso Creek - Desert Glow

Client Project/Site: RWQCB Pond Testing, 2015

Revision: 2

For:

Envirotech Consultants, Inc.

5400 Rosedale Highway

Bakersfield, California 93308

Attn: Jane McNaboe



Authorized for release by:

6/4/2015 9:29:29 AM

Janice Hsu, Project Manager I

(949)261-1022

[janice.hsu@testamericainc.com](mailto:janice.hsu@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Sample Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-107073-1	Desert Glow #1	Water	04/14/15 09:08	04/14/15 18:45
440-107073-2	Pond #2	Water	04/14/15 09:30	04/14/15 18:45

- 1
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- 11
- 12
- 13
- 14

# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

**Job ID: 440-107073-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-107073-1

#### Comments

Revised report to add 8015GRO result.

#### Receipt

The samples were received on 4/14/2015 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.1° C, 5.2° C, 5.6° C and 5.8° C.

#### GC/MS VOA

Method(s) 8260B: The following volatile samples were received and analyzed with significant headspace in the sample vial: Desert Glow #1 (440-107073-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following volatile sample was analyzed with significant headspace in the sample vial due to sample was received with headspace: Pond #2 (440-107073-2). Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 249425. The LCS was performed in duplicate to provide precision for the batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 249238. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.(LCS 440-249238/2-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The method blank for 249356 contained Maganasium above the reporting limit (RL). Associated sample was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.Pond #2 (440-107073-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Job ID: 440-107073-1 (Continued)

### Laboratory: TestAmerica Irvine (Continued)

#### Narrative

#### Job Narrative 440-107073-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/14/2015 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.1° C, 5.2° C, 5.6° C and 5.8° C.

#### RAD

Method(s) 9310: Gross alpha/beta Batch: 189677

The gross alpha and/or gross beta detection goals were not met for the following samples due to a reduction of the sample size which can be attributed to high residual mass: Desert Glow #1 (440-107073-1), Pond #2 (440-107073-2), (160-11454-A-1-B) and (160-11454-A-1-H DU). Analytical results are reported with the detection limit achieved.

Method(s) 9320: Radium-228 prep batch# 186429

The following samples did not meet the radium-228 detection goal due to the reduced sample volume attributed to matrix interferences (see prep NCM 54810). The data have been qualified and reported. Pond #2 (440-107073-2)

Method(s) PrecSep-21: radium-228 batch #186429 and radium-226 batch #186427

The following samples were run at reduced aliquots: Desert Glow #1 (440-107073-1) and Pond #2 (440-107073-2).

440-107071-1 and 107073-2 were reduced to 250 mL because they were brown, had a foul odor, and there was oily residue on the inside of the sample bottles.

440-107072-1 and 107073-1 were reduced to 500 mL because they were yellow and had a foul odor.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6020A: prep 189699 (water) \ analysis 190421

The following sample(s) was diluted due to the abundance of non-target analytes. Samples were high in salts which can cause internal standard and instrument QC failure: Desert Glow #1 (440-107073-1), Pond #2 (440-107073-2), (440-107073-P-1-E MS), (440-107073-P-1-F MSD) and (440-107073-P-1-D SD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

**Client Sample ID: Desert Glow #1**

**Lab Sample ID: 440-107073-1**

**Date Collected: 04/14/15 09:08**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		10		ug/L			04/16/15 15:18	5
Ethylbenzene	ND		10		ug/L			04/16/15 15:18	5
m,p-Xylene	ND		10		ug/L			04/16/15 15:18	5
o-Xylene	ND		10		ug/L			04/16/15 15:18	5
<b>Toluene</b>	<b>200</b>		10		ug/L			04/16/15 15:18	5
Xylenes, Total	ND		10		ug/L			04/16/15 15:18	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	107		80 - 128		04/16/15 15:18	5
<i>4-Bromofluorobenzene (Surr)</i>	101		80 - 120		04/16/15 15:18	5
<i>Dibromofluoromethane (Surr)</i>	106		76 - 132		04/16/15 15:18	5

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Acenaphthylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Benzo[a]anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Benzo[a]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Benzo[b]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Benzo[k]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Chrysene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Fluorene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
<b>Naphthalene</b>	<b>1.3</b>		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Phenanthrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1
Pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 16:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2-Fluorobiphenyl (Surr)</i>	70		31 - 120	04/16/15 17:25	04/20/15 16:41	1
<i>Nitrobenzene-d5</i>	71		25 - 133	04/16/15 17:25	04/20/15 16:41	1
<i>Terphenyl-d14</i>	86		10 - 120	04/16/15 17:25	04/20/15 16:41	1

### Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>GRO (C4-C12)</b>	<b>810</b>		250		ug/L			04/16/15 15:40	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>4-Bromofluorobenzene (Surr)</i>	95		65 - 140		04/16/15 15:40	5

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C13-C22</b>	<b>1.3</b>		0.54		mg/L		04/16/15 06:37	04/16/15 12:08	1
<b>C23-C40</b>	<b>1.6</b>		0.54		mg/L		04/16/15 06:37	04/16/15 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n-Octacosane</i>	62		45 - 120	04/16/15 06:37	04/16/15 12:08	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

**Client Sample ID: Desert Glow #1**

**Lab Sample ID: 440-107073-1**

Date Collected: 04/14/15 09:08

Matrix: Water

Date Received: 04/14/15 18:45

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>0.97</b>		0.50		mg/L			04/15/15 18:12	1
Nitrate as NO3	ND		0.50		mg/L			04/15/15 18:12	1
<b>Chloride</b>	<b>68</b>		2.5		mg/L			04/15/15 18:27	5
<b>Sulfate</b>	<b>0.92</b>		0.50		mg/L			04/15/15 18:12	1

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:48	1
Arsenic	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:48	1
Barium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:04	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Boron</b>	<b>0.93</b>		0.050		mg/L		04/16/15 13:12	04/17/15 08:04	1
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Calcium</b>	<b>3.6</b>		0.10		mg/L		04/16/15 13:12	04/17/15 08:04	1
Chromium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:04	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:04	1
Copper	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Iron</b>	<b>0.096</b>		0.040		mg/L		04/16/15 13:12	04/17/15 08:04	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 12:48	1
Lithium	ND		0.050		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Magnesium</b>	<b>0.034</b>		0.020		mg/L		04/16/15 13:12	04/17/15 12:48	1
Manganese	ND		0.020		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Molybdenum</b>	<b>0.043</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:04	1
Nickel	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Potassium</b>	<b>2.2</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:04	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:48	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:04	1
<b>Sodium</b>	<b>88</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:04	1
Strontium	ND		0.020		mg/L		04/16/15 13:12	04/17/15 08:04	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:48	1
Vanadium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:04	1
Zinc	ND		0.020		mg/L		04/16/15 13:12	04/17/15 08:04	1

### Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<2.5		2.5	0.58	ug/L		05/06/15 14:44	05/12/15 02:05	5
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<1.7		1.7	0.39	pCi/L		05/06/15 14:44	05/12/15 02:05	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/15/15 23:05	04/17/15 00:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>350</b>		10		mg/L			04/17/15 08:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>140</b>		4.0		mg/L			04/20/15 11:56	1
<b>Bicarbonate ion as HCO3</b>	<b>170</b>		4.8		mg/L			04/20/15 11:56	1
Carbonate as CO3	ND		2.4		mg/L			04/20/15 11:56	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

**Client Sample ID: Desert Glow #1**  
**Date Collected: 04/14/15 09:08**  
**Date Received: 04/14/15 18:45**

**Lab Sample ID: 440-107073-1**  
**Matrix: Water**

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Hydroxide as OH	ND		1.4	mg/L			04/20/15 11:56	1

## Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	3.09	U G	2.65	2.68	4.11	pCi/L	05/06/15 13:40	05/11/15 07:30	1
Gross Beta	0.779	U	0.971	0.974	1.56	pCi/L	05/06/15 13:40	05/11/15 07:30	1

## Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0735	U	0.104	0.104	0.176	pCi/L	04/17/15 13:41	05/11/15 07:33	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	04/17/15 13:41	05/11/15 07:33	1

## Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.393	0.393	0.672	pCi/L	04/17/15 13:54	05/04/15 10:29	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	04/17/15 13:54	05/04/15 10:29	1
Y Carrier	89.3		40 - 110	04/17/15 13:54	05/04/15 10:29	1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.246523		0.410	0.407	0.672	pCi/L		05/13/15 19:28	1

**Client Sample ID: Pond #2**  
**Date Collected: 04/14/15 09:30**  
**Date Received: 04/14/15 18:45**

**Lab Sample ID: 440-107073-2**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			04/18/15 20:27	1
Ethylbenzene	ND		2.0		ug/L			04/18/15 20:27	1
m,p-Xylene	ND		2.0		ug/L			04/18/15 20:27	1
o-Xylene	ND		2.0		ug/L			04/18/15 20:27	1
Toluene	ND		2.0		ug/L			04/18/15 20:27	1
Xylenes, Total	ND		2.0		ug/L			04/18/15 20:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		04/18/15 20:27	1
4-Bromofluorobenzene (Surr)	98		80 - 120		04/18/15 20:27	1
Dibromofluoromethane (Surr)	88		76 - 132		04/18/15 20:27	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Acenaphthylene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Anthracene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Benzo[a]anthracene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Benzo[a]pyrene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Benzo[b]fluoranthene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Benzo[g,h,i]perylene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Benzo[k]fluoranthene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Chrysene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Dibenz(a,h)anthracene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Fluoranthene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Fluorene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Indeno[1,2,3-cd]pyrene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
<b>Naphthalene</b>	<b>0.69</b>		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Phenanthrene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Pyrene	ND		0.21		ug/L		04/16/15 17:25	04/20/15 17:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	67		31 - 120				04/16/15 17:25	04/20/15 17:02	1
Nitrobenzene-d5	77		25 - 133				04/16/15 17:25	04/20/15 17:02	1
Terphenyl-d14	93		10 - 120				04/16/15 17:25	04/20/15 17:02	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		1000		ug/L			04/16/15 04:11	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		65 - 140					04/16/15 04:11	20

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C13-C22</b>	<b>1.7</b>		0.54		mg/L		04/16/15 06:37	04/16/15 12:48	1
<b>C23-C40</b>	<b>2.7</b>		0.54		mg/L		04/16/15 06:37	04/16/15 12:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	55		45 - 120				04/16/15 06:37	04/16/15 12:48	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>0.80</b>		0.50		mg/L			04/15/15 18:43	1
Nitrate as NO3	ND		0.50		mg/L			04/15/15 18:43	1
<b>Chloride</b>	<b>43</b>		2.5		mg/L			04/15/15 19:14	5
<b>Sulfate</b>	<b>0.65</b>		0.50		mg/L			04/15/15 18:43	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:51	1
Arsenic	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:51	1
<b>Barium</b>	<b>0.011</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:07	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Boron</b>	<b>0.89</b>		0.050		mg/L		04/16/15 13:12	04/17/15 08:07	1
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Calcium</b>	<b>8.1</b>		0.10		mg/L		04/16/15 13:12	04/17/15 08:07	1
Chromium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:07	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:07	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Client Sample ID: Pond #2

Date Collected: 04/14/15 09:30

Date Received: 04/14/15 18:45

## Lab Sample ID: 440-107073-2

Matrix: Water

### Method: 6010B - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Iron</b>	<b>0.16</b>		0.040		mg/L		04/16/15 13:12	04/17/15 08:07	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 12:51	1
Lithium	ND		0.050		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Magnesium</b>	<b>0.68</b>		0.020		mg/L		04/16/15 13:12	04/17/15 12:51	1
<b>Manganese</b>	<b>0.022</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:07	1
Molybdenum	ND		0.020		mg/L		04/16/15 13:12	04/17/15 08:07	1
Nickel	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Potassium</b>	<b>2.1</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:07	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:51	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Sodium</b>	<b>95</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:07	1
<b>Strontium</b>	<b>0.047</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:07	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:51	1
Vanadium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:07	1
Zinc	ND		0.020		mg/L		04/16/15 13:12	04/17/15 08:07	1

### Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<2.5		2.5	0.58	ug/L		05/06/15 14:44	05/12/15 02:32	5
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<1.7		1.7	0.39	pCi/L		05/06/15 14:44	05/12/15 02:32	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/15/15 23:05	04/17/15 00:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>370</b>		10		mg/L			04/17/15 08:58	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>170</b>		4.0		mg/L			04/17/15 06:44	1
<b>Bicarbonate ion as HCO3</b>	<b>210</b>		4.8		mg/L			04/17/15 06:44	1
Carbonate as CO3	ND		2.4		mg/L			04/17/15 06:44	1
Hydroxide as OH	ND		1.4		mg/L			04/17/15 06:44	1

### Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count	Total	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.					
			(2σ+/-)	(2σ+/-)					
Gross Alpha	-0.837	U G	2.81	2.82	5.46	pCi/L	05/06/15 13:40	05/11/15 07:30	1
<b>Gross Beta</b>	<b>1.80</b>		1.01	1.03	1.53	pCi/L	05/06/15 13:40	05/11/15 07:30	1

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.					
			(2σ+/-)	(2σ+/-)					
Radium-226	0.209	U	0.254	0.255	0.420	pCi/L	04/17/15 13:41	05/11/15 07:33	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
 SDG: LINN, Poso Creek - Desert Glow

**Client Sample ID: Pond #2**

**Date Collected: 04/14/15 09:30**

**Date Received: 04/14/15 18:45**

**Lab Sample ID: 440-107073-2**

**Matrix: Water**

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	04/17/15 13:41	05/11/15 07:33	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.135	U G	0.744	0.744	1.31	pCi/L	04/17/15 13:54	05/04/15 10:29	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	04/17/15 13:54	05/04/15 10:29	1
Y Carrier	92.0		40 - 110	04/17/15 13:54	05/04/15 10:29	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.344325		0.790	0.786	1.31	pCi/L		05/13/15 19:28	1

# Method Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
6020A	Metals (ICP/MS)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
9310	Gross Alpha / Beta (GFPC)	SW846	TAL SL
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.  
SM = "Standard Methods For The Examination Of Water And Wastewater",  
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.  
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

#### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022  
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Lab Chronicle

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

**Client Sample ID: Desert Glow #1**

**Lab Sample ID: 440-107073-1**

**Date Collected: 04/14/15 09:08**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	10 mL	10 mL	249227	04/16/15 15:18	SS	TAL IRV
Total/NA	Prep	3520C			980 mL	1 mL	249425	04/16/15 17:25	AK	TAL IRV
Total/NA	Analysis	8270C SIM		1	980 mL	1 mL	249919	04/20/15 16:41	AI	TAL IRV
Total/NA	Analysis	8015B		5	10 mL	10 mL	249263	04/16/15 15:40	IM	TAL IRV
Total/NA	Prep	3510C			930 mL	1 mL	249238	04/16/15 06:37	AP	TAL IRV
Total/NA	Analysis	8015B		1	930 mL	1 mL	249240	04/16/15 12:08	CN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL		249001	04/15/15 18:12	NN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL		249002	04/15/15 18:12	NN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL		249002	04/15/15 18:27	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249549	04/17/15 08:04	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249626	04/17/15 12:48	VS	TAL IRV
Total/NA	Prep	3010A			50 mL	50 mL	189699	05/06/15 14:44	DAS	TAL SL
Total/NA	Analysis	6020A		5	50 mL	50 mL	190421	05/12/15 02:05	FLC	TAL SL
Total/NA	Prep	7470A			20 mL	20 mL	249202	04/15/15 23:05	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	249571	04/17/15 00:12	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			249958	04/20/15 11:56	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	249554	04/17/15 08:58	XL	TAL IRV
Total/NA	Prep	Evaporation			117 mL	1.0 g	189677	05/06/15 13:40	SCB	TAL SL
Total/NA	Analysis	9310		1	117 mL		190263	05/11/15 07:30	MLK	TAL SL
Total/NA	Prep	PrecSep-21			501.61 mL	1.0 g	186427	04/17/15 13:41	LEM	TAL SL
Total/NA	Analysis	9315		1	501.61 mL		190225	05/11/15 07:33	MLK	TAL SL
Total/NA	Prep	PrecSep_0			501.61 mL	1.0 g	186429	04/17/15 13:54	LEM	TAL SL
Total/NA	Analysis	9320		1	501.61 mL		189176	05/04/15 10:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			190710	05/13/15 19:28	RTM	TAL SL

**Client Sample ID: Pond #2**

**Lab Sample ID: 440-107073-2**

**Date Collected: 04/14/15 09:30**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	249744	04/18/15 20:27	TN	TAL IRV
Total/NA	Prep	3520C			965 mL	1 mL	249425	04/16/15 17:25	AK	TAL IRV
Total/NA	Analysis	8270C SIM		1	965 mL	1 mL	249919	04/20/15 17:02	AI	TAL IRV
Total/NA	Analysis	8015B		20	10 mL	10 mL	249061	04/16/15 04:11	AT	TAL IRV
Total/NA	Prep	3510C			930 mL	1 mL	249238	04/16/15 06:37	AP	TAL IRV
Total/NA	Analysis	8015B		1	930 mL	1 mL	249240	04/16/15 12:48	CN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL		249001	04/15/15 18:43	NN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL		249002	04/15/15 18:43	NN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL		249002	04/15/15 19:14	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV

TestAmerica Irvine

# Lab Chronicle

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

**Client Sample ID: Pond #2**

**Lab Sample ID: 440-107073-2**

**Date Collected: 04/14/15 09:30**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249549	04/17/15 08:07	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249626	04/17/15 12:51	VS	TAL IRV
Total/NA	Prep	3010A			50 mL	50 mL	189699	05/06/15 14:44	DAS	TAL SL
Total/NA	Analysis	6020A		5	50 mL	50 mL	190421	05/12/15 02:32	FLC	TAL SL
Total/NA	Prep	7470A			20 mL	20 mL	249202	04/15/15 23:05	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	249571	04/17/15 00:15	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			249517	04/17/15 06:44	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	249554	04/17/15 08:58	XL	TAL IRV
Total/NA	Prep	Evaporation			123 mL	1.0 g	189677	05/06/15 13:40	SCB	TAL SL
Total/NA	Analysis	9310		1	123 mL		190263	05/11/15 07:30	MLK	TAL SL
Total/NA	Prep	PrecSep-21			250.79 mL	1.0 g	186427	04/17/15 13:41	LEM	TAL SL
Total/NA	Analysis	9315		1	250.79 mL		190225	05/11/15 07:33	MLK	TAL SL
Total/NA	Prep	PrecSep_0			250.79 mL	1.0 g	186429	04/17/15 13:54	LEM	TAL SL
Total/NA	Analysis	9320		1	250.79 mL		189176	05/04/15 10:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			190710	05/13/15 19:28	RTM	TAL SL

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-249227/4**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			04/16/15 07:57	1
Ethylbenzene	ND		2.0		ug/L			04/16/15 07:57	1
m,p-Xylene	ND		2.0		ug/L			04/16/15 07:57	1
o-Xylene	ND		2.0		ug/L			04/16/15 07:57	1
Toluene	ND		2.0		ug/L			04/16/15 07:57	1
Xylenes, Total	ND		2.0		ug/L			04/16/15 07:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		04/16/15 07:57	1
4-Bromofluorobenzene (Surr)	102		80 - 120		04/16/15 07:57	1
Dibromofluoromethane (Surr)	106		76 - 132		04/16/15 07:57	1

**Lab Sample ID: LCS 440-249227/5**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.5		ug/L		98	68 - 130
Ethylbenzene	25.0	23.5		ug/L		94	70 - 130
m,p-Xylene	25.0	23.8		ug/L		95	70 - 130
o-Xylene	25.0	24.4		ug/L		98	70 - 130
Toluene	25.0	23.3		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-106792-D-5 MS**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	480	F1	125	594		ug/L		93	66 - 130
Ethylbenzene	150		125	266		ug/L		90	70 - 130
m,p-Xylene	430	F1	125	552		ug/L		101	70 - 133
o-Xylene	190		125	315		ug/L		100	70 - 133
Toluene	530	E	125	628	E 4	ug/L		79	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-106792-D-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 249227**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Benzene	480	F1	125	556	F1	ug/L		62	66 - 130	7	20
Ethylbenzene	150		125	250		ug/L		78	70 - 130	6	20
m,p-Xylene	430	F1	125	506	F1	ug/L		64	70 - 133	9	25
o-Xylene	190		125	292		ug/L		82	70 - 133	7	20
Toluene	530	E	125	584	E 4	ug/L		44	70 - 130	7	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

**Lab Sample ID: MB 440-249744/3**  
**Matrix: Water**  
**Analysis Batch: 249744**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			04/18/15 11:01	1
Ethylbenzene	ND		2.0		ug/L			04/18/15 11:01	1
m,p-Xylene	ND		2.0		ug/L			04/18/15 11:01	1
o-Xylene	ND		2.0		ug/L			04/18/15 11:01	1
Toluene	ND		2.0		ug/L			04/18/15 11:01	1
Xylenes, Total	ND		2.0		ug/L			04/18/15 11:01	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	105		80 - 128		04/18/15 11:01	1
4-Bromofluorobenzene (Surr)	98		80 - 120		04/18/15 11:01	1
Dibromofluoromethane (Surr)	108		76 - 132		04/18/15 11:01	1

**Lab Sample ID: LCS 440-249744/4**  
**Matrix: Water**  
**Analysis Batch: 249744**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Benzene	25.0	23.3		ug/L		93	68 - 130
Ethylbenzene	25.0	24.1		ug/L		96	70 - 130
m,p-Xylene	25.0	24.7		ug/L		99	70 - 130
o-Xylene	25.0	26.0		ug/L		104	70 - 130
Toluene	25.0	24.3		ug/L		97	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	103		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	108		76 - 132

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-106770-A-1 MS**

**Matrix: Water**

**Analysis Batch: 249744**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	23.2		ug/L		90	66 - 130
Ethylbenzene	ND		25.0	23.5		ug/L		94	70 - 130
m,p-Xylene	ND		25.0	25.2		ug/L		101	70 - 133
o-Xylene	ND		25.0	25.5		ug/L		102	70 - 133
Toluene	ND		25.0	23.3		ug/L		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>Toluene-d8 (Surr)</i>	103		80 - 128
<i>4-Bromofluorobenzene (Surr)</i>	96		80 - 120
<i>Dibromofluoromethane (Surr)</i>	107		76 - 132

**Lab Sample ID: 440-106770-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 249744**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	25.0		ug/L		97	66 - 130	7	20
Ethylbenzene	ND		25.0	24.9		ug/L		100	70 - 130	6	20
m,p-Xylene	ND		25.0	26.7		ug/L		107	70 - 133	6	25
o-Xylene	ND		25.0	27.3		ug/L		109	70 - 133	7	20
Toluene	ND		25.0	25.1		ug/L		101	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
<i>Toluene-d8 (Surr)</i>	102		80 - 128
<i>4-Bromofluorobenzene (Surr)</i>	98		80 - 120
<i>Dibromofluoromethane (Surr)</i>	106		76 - 132

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 440-249425/1-A**

**Matrix: Water**

**Analysis Batch: 249919**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 249425**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Acenaphthylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[a]anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[a]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[b]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[k]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Chrysene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Fluorene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: MB 440-249425/1-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Phenanthrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		31 - 120	04/16/15 17:25	04/20/15 12:14	1
Nitrobenzene-d5	75		25 - 133	04/16/15 17:25	04/20/15 12:14	1
Terphenyl-d14	81		10 - 120	04/16/15 17:25	04/20/15 12:14	1

**Lab Sample ID: LCS 440-249425/2-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.00	0.740		ug/L		74	47 - 103
Acenaphthylene	1.00	0.735		ug/L		73	45 - 102
Anthracene	1.00	0.731		ug/L		73	47 - 111
Benzo[a]anthracene	1.00	0.801		ug/L		80	56 - 110
Benzo[a]pyrene	1.00	0.741		ug/L		74	48 - 110
Benzo[b]fluoranthene	1.00	0.879		ug/L		88	53 - 116
Benzo[g,h,i]perylene	1.00	1.01		ug/L		101	44 - 130
Benzo[k]fluoranthene	1.00	0.868		ug/L		87	51 - 127
Chrysene	1.00	0.842		ug/L		84	52 - 118
Dibenz(a,h)anthracene	1.00	0.928		ug/L		93	44 - 125
Fluoranthene	1.00	0.860		ug/L		86	51 - 116
Fluorene	1.00	0.786		ug/L		79	50 - 106
Indeno[1,2,3-cd]pyrene	1.00	0.966		ug/L		97	41 - 127
Naphthalene	1.00	0.721		ug/L		72	40 - 100
Phenanthrene	1.00	0.812		ug/L		81	49 - 110
Pyrene	1.00	0.839		ug/L		84	41 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	76		31 - 120
Nitrobenzene-d5	79		25 - 133
Terphenyl-d14	78		10 - 120

**Lab Sample ID: LCSD 440-249425/3-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acenaphthene	1.00	0.828		ug/L		83	47 - 103	11	35
Acenaphthylene	1.00	0.824		ug/L		82	45 - 102	11	35
Anthracene	1.00	0.842		ug/L		84	47 - 111	14	35
Benzo[a]anthracene	1.00	0.885		ug/L		88	56 - 110	10	35
Benzo[a]pyrene	1.00	0.826		ug/L		83	48 - 110	11	35
Benzo[b]fluoranthene	1.00	0.947		ug/L		95	53 - 116	7	35
Benzo[g,h,i]perylene	1.00	1.08		ug/L		108	44 - 130	6	35

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCSD 440-249425/3-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene	1.00	0.928		ug/L		93	51 - 127	7	35
Chrysene	1.00	0.912		ug/L		91	52 - 118	8	35
Dibenz(a,h)anthracene	1.00	0.985		ug/L		98	44 - 125	6	35
Fluoranthene	1.00	0.932		ug/L		93	51 - 116	8	35
Fluorene	1.00	0.859		ug/L		86	50 - 106	9	35
Indeno[1,2,3-cd]pyrene	1.00	0.997		ug/L		100	41 - 127	3	35
Naphthalene	1.00	0.776		ug/L		78	40 - 100	7	35
Phenanthrene	1.00	0.893		ug/L		89	49 - 110	10	35
Pyrene	1.00	0.904		ug/L		90	41 - 115	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		31 - 120
Nitrobenzene-d5	80		25 - 133
Terphenyl-d14	81		10 - 120

## Method: 8015B - Gasoline Range Organics - (GC)

**Lab Sample ID: MB 440-249061/4**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			04/15/15 17:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		65 - 140		04/15/15 17:05	1

**Lab Sample ID: LCS 440-249061/33**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	799		ug/L		100	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		65 - 140

**Lab Sample ID: 440-106896-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	650		800	1330		ug/L		86	65 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		65 - 140

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8015B - Gasoline Range Organics - (GC) (Continued)

**Lab Sample ID: 440-106896-A-1 MSD**

**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	650		800	1370		ug/L		90	65 - 140	3	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
4-Bromofluorobenzene (Surr)	104		65 - 140								

**Lab Sample ID: MB 440-249263/5**

**Matrix: Water**  
**Analysis Batch: 249263**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
GRO (C4-C12)	ND		50		ug/L			04/16/15 10:58	1	
<b>Surrogate</b>	<b>%Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>				
4-Bromofluorobenzene (Surr)	94		65 - 140		04/16/15 10:58	1				

**Lab Sample ID: LCS 440-249263/4**

**Matrix: Water**  
**Analysis Batch: 249263**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	815		ug/L		102	80 - 120
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
4-Bromofluorobenzene (Surr)	98		65 - 140				

**Lab Sample ID: 440-106767-D-1 MS**

**Matrix: Water**  
**Analysis Batch: 249263**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	ND		800	703		ug/L		88	65 - 140
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	86		65 - 140						

**Lab Sample ID: 440-106767-D-1 MSD**

**Matrix: Water**  
**Analysis Batch: 249263**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	ND		800	773		ug/L		97	65 - 140	9	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
4-Bromofluorobenzene (Surr)	94		65 - 140								

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 440-249238/1-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		0.50		mg/L		04/16/15 06:37	04/16/15 11:08	1
C23-C40	ND		0.50		mg/L		04/16/15 06:37	04/16/15 11:08	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	69		45 - 120				04/16/15 06:37	04/16/15 11:08	1

**Lab Sample ID: LCS 440-249238/2-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
C10-C28	1.00	0.660		mg/L		66	40 - 115		
Surrogate	%Recovery	LCS Qualifier	Limits						
n-Octacosane	68		45 - 120						

**Lab Sample ID: LCSD 440-249238/3-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
C10-C28	1.00	0.643		mg/L		64	40 - 115	3	25
Surrogate	%Recovery	LCSD Qualifier	Limits						
n-Octacosane	68		45 - 120						

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-249001/4**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as NO3	ND		0.50		mg/L			04/15/15 12:12	1

**Lab Sample ID: LCS 440-249001/2**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Nitrate as NO3	5.00	5.03		mg/L		101	90 - 110		

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 440-249001/6**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	5.00	5.08		mg/L		102	90 - 110	1	20

**Lab Sample ID: 440-107064-AC-2 MS**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	ND		50.0	55.4		mg/L		111	80 - 120

**Lab Sample ID: 440-107064-AC-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	ND		50.0	55.1		mg/L		110	80 - 120	1	20

**Lab Sample ID: MB 440-249002/4**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			04/15/15 12:12	1
Chloride	ND		0.50		mg/L			04/15/15 12:12	1
Sulfate	ND		0.50		mg/L			04/15/15 12:12	1

**Lab Sample ID: LCS 440-249002/2**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.06		mg/L		101	90 - 110
Chloride	5.00	4.90		mg/L		98	90 - 110
Fluoride	5.00	4.51		mg/L		90	90 - 110
Sulfate	5.00	4.73		mg/L		95	90 - 110

**Lab Sample ID: LCSD 440-249002/6**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	5.00	5.10		mg/L		102	90 - 110	1	20
Chloride	5.00	5.03		mg/L		100	90 - 110	2	20
Fluoride	5.00	4.64		mg/L		93	90 - 110	3	20
Sulfate	5.00	5.00		mg/L		100	90 - 110	6	20

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-107064-AC-2 MS**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		50.0	57.7		mg/L		115	80 - 120
Chloride	120		50.0	161		mg/L		88	80 - 120
Fluoride	ND		50.0	53.4		mg/L		107	80 - 120
Sulfate	670		50.0	673	4	mg/L		7	80 - 120

**Lab Sample ID: 440-107064-AC-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		50.0	56.6		mg/L		113	80 - 120	2	20
Chloride	120		50.0	157		mg/L		81	80 - 120	2	20
Fluoride	ND		50.0	53.3		mg/L		107	80 - 120	0	20
Sulfate	670		50.0	651	4	mg/L		-37	80 - 120	3	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Boron	ND		0.050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Calcium	ND		0.10		mg/L		04/16/15 13:12	04/17/15 07:04	1
Chromium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Copper	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Iron	ND		0.040		mg/L		04/16/15 13:12	04/17/15 07:04	1
Lithium	ND		0.050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Manganese	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Molybdenum	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Nickel	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Potassium	ND		0.50		mg/L		04/16/15 13:12	04/17/15 07:04	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Sodium	ND		0.50		mg/L		04/16/15 13:12	04/17/15 07:04	1
Strontium	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Vanadium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Zinc	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
 SDG: LINN, Poso Creek - Desert Glow

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 10:46	1
Magnesium	ND		0.020		mg/L		04/16/15 13:12	04/17/15 10:46	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1

**Lab Sample ID: LCS 440-249356/2-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	1.00	0.996		mg/L		100	80 - 120
Beryllium	1.00	1.01		mg/L		101	80 - 120
Boron	1.00	0.986		mg/L		99	80 - 120
Cadmium	1.00	0.996		mg/L		100	80 - 120
Calcium	5.00	5.12		mg/L		102	80 - 120
Chromium	1.00	0.985		mg/L		99	80 - 120
Cobalt	1.00	0.999		mg/L		100	80 - 120
Copper	1.00	0.987		mg/L		99	80 - 120
Iron	1.00	1.06		mg/L		106	80 - 120
Lithium	1.00	0.974		mg/L		97	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Molybdenum	1.00	0.987		mg/L		99	80 - 120
Nickel	1.00	1.00		mg/L		100	80 - 120
Potassium	10.0	9.95		mg/L		100	80 - 120
Silver	0.500	0.478		mg/L		96	80 - 120
Sodium	10.0	9.79		mg/L		98	80 - 120
Strontium	1.00	0.994		mg/L		99	80 - 120
Vanadium	1.00	0.975		mg/L		98	80 - 120
Zinc	1.00	0.954		mg/L		95	80 - 120

**Lab Sample ID: LCS 440-249356/2-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	0.985		mg/L		98	80 - 120
Arsenic	1.00	0.967		mg/L		97	80 - 120
Lead	1.00	0.960		mg/L		96	80 - 120
Magnesium	5.00	4.62		mg/L		92	80 - 120
Selenium	1.00	0.909		mg/L		91	80 - 120
Thallium	1.00	0.920		mg/L		92	80 - 120

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	0.18		1.00	1.15		mg/L		97	75 - 125

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Beryllium	ND		1.00	1.01		mg/L		101	75 - 125	
Boron	0.14		1.00	1.16		mg/L		102	75 - 125	
Cadmium	ND		1.00	0.964		mg/L		96	75 - 125	
Calcium	120		5.00	125	4	mg/L		41	75 - 125	
Chromium	0.0066		1.00	0.986		mg/L		98	75 - 125	
Cobalt	ND		1.00	0.944		mg/L		94	75 - 125	
Copper	ND		1.00	1.01		mg/L		101	75 - 125	
Iron	2.7	F1	1.00	3.33	F1	mg/L		64	75 - 125	
Lithium	ND		1.00	0.858		mg/L		86	75 - 125	
Manganese	0.034		1.00	0.987		mg/L		95	75 - 125	
Molybdenum	ND		1.00	0.983		mg/L		98	75 - 125	
Nickel	ND		1.00	0.956		mg/L		96	75 - 125	
Potassium	2.6		10.0	12.5		mg/L		99	75 - 125	
Silver	ND		0.500	0.492		mg/L		98	75 - 125	
Sodium	130		10.0	141	4	mg/L		68	75 - 125	
Strontium	0.81		1.00	1.79		mg/L		98	75 - 125	
Vanadium	0.031		1.00	1.02		mg/L		99	75 - 125	
Zinc	ND		1.00	0.955		mg/L		94	75 - 125	

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Antimony	ND		1.00	0.978		mg/L		98	75 - 125	
Arsenic	ND		1.00	0.973		mg/L		97	75 - 125	
Lead	ND		1.00	0.890		mg/L		89	75 - 125	
Magnesium	47		5.00	49.9	4	mg/L		49	75 - 125	
Selenium	ND		1.00	0.883		mg/L		88	75 - 125	
Thallium	ND		1.00	0.841		mg/L		84	75 - 125	

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Barium	0.18		1.00	1.11		mg/L		94	75 - 125	3	20	
Beryllium	ND		1.00	0.992		mg/L		99	75 - 125	2	20	
Boron	0.14		1.00	1.11		mg/L		98	75 - 125	4	20	
Cadmium	ND		1.00	0.928		mg/L		93	75 - 125	4	20	
Calcium	120		5.00	124	4	mg/L		13	75 - 125	1	20	
Chromium	0.0066		1.00	0.942		mg/L		94	75 - 125	4	20	
Cobalt	ND		1.00	0.917		mg/L		92	75 - 125	3	20	
Copper	ND		1.00	0.979		mg/L		98	75 - 125	3	20	
Iron	2.7	F1	1.00	3.36	F1	mg/L		67	75 - 125	1	20	
Lithium	ND		1.00	0.845		mg/L		85	75 - 125	1	20	
Manganese	0.034		1.00	0.973		mg/L		94	75 - 125	1	20	
Molybdenum	ND		1.00	0.960		mg/L		96	75 - 125	2	20	
Nickel	ND		1.00	0.918		mg/L		92	75 - 125	4	20	

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Potassium	2.6		10.0	12.3		mg/L		97	75 - 125	2	20
Silver	ND		0.500	0.475		mg/L		95	75 - 125	3	20
Sodium	130		10.0	139	4	mg/L		50	75 - 125	1	20
Strontium	0.81		1.00	1.76		mg/L		95	75 - 125	2	20
Vanadium	0.031		1.00	0.988		mg/L		96	75 - 125	3	20
Zinc	ND		1.00	0.917		mg/L		91	75 - 125	4	20

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	ND		1.00	1.00		mg/L		100	75 - 125	2	20
Arsenic	ND		1.00	1.01		mg/L		101	75 - 125	3	20
Lead	ND		1.00	0.915		mg/L		92	75 - 125	3	20
Magnesium	47		5.00	51.3	4	mg/L		76	75 - 125	3	20
Selenium	ND		1.00	0.916		mg/L		92	75 - 125	4	20
Thallium	ND		1.00	0.867		mg/L		87	75 - 125	3	20

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 160-189699/1-A**  
**Matrix: Water**  
**Analysis Batch: 190421**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 189699**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Uranium	<1.0		1.0	0.23	ug/L		05/06/15 14:44	05/12/15 01:38		2

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Uranium	<0.67		0.67	0.15	pCi/L		05/06/15 14:44	05/12/15 01:38		2

**Lab Sample ID: LCS 160-189699/2-A**  
**Matrix: Water**  
**Analysis Batch: 190421**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189699**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Added
Uranium	1000	966		ug/L		97	80 - 120

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Added
Uranium	670	647		pCi/L		97	80 - 120

**Lab Sample ID: 440-107073-1 MS**  
**Matrix: Water**  
**Analysis Batch: 190421**

**Client Sample ID: Desert Glow #1**  
**Prep Type: Total/NA**  
**Prep Batch: 189699**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Uranium	<2.5		1000	1020		ug/L		102	75 - 125

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
 SDG: LINN, Poso Creek - Desert Glow

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	<1.7		670	686		pCi/L		102	75 - 125

**Lab Sample ID: 440-107073-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 190421**

**Client Sample ID: Desert Glow #1**  
**Prep Type: Total/NA**  
**Prep Batch: 189699**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Uranium	<2.5		1000	1020		ug/L		102	75 - 125	1	20
Uranium	<1.7		670	682		pCi/L		102	75 - 125	1	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 440-249202/1-A**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/15/15 23:05	04/16/15 23:45	1

**Lab Sample ID: LCS 440-249202/2-A**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00800	0.00851		mg/L		106	80 - 120

**Lab Sample ID: 440-107024-H-6-B MS**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.00800	0.00948		mg/L		118	70 - 130

**Lab Sample ID: 440-107024-H-6-C MSD**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00800	0.00936		mg/L		117	70 - 130	1	20

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-249517/3**  
**Matrix: Water**  
**Analysis Batch: 249517**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			04/17/15 05:02	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			04/17/15 05:02	1
Carbonate as CO3	ND		2.4		mg/L			04/17/15 05:02	1
Hydroxide as OH	ND		1.4		mg/L			04/17/15 05:02	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: SM 2320B - Alkalinity (Continued)

**Lab Sample ID: LCS 440-249517/2**  
**Matrix: Water**  
**Analysis Batch: 249517**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	85.4	87.2		mg/L		102	80 - 120

**Lab Sample ID: 440-107181-A-2 DU**  
**Matrix: Water**  
**Analysis Batch: 249517**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Alkalinity as CaCO3	ND		ND		mg/L		NC	20
Bicarbonate ion as HCO3	ND		ND		mg/L		NC	20
Carbonate as CO3	ND		ND		mg/L		NC	20
Hydroxide as OH	ND		ND		mg/L		NC	20

**Lab Sample ID: MB 440-249958/3**  
**Matrix: Water**  
**Analysis Batch: 249958**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	mg/L			04/20/15 10:56	1
Bicarbonate ion as HCO3	ND		4.8	mg/L			04/20/15 10:56	1
Carbonate as CO3	ND		2.4	mg/L			04/20/15 10:56	1
Hydroxide as OH	ND		1.4	mg/L			04/20/15 10:56	1

**Lab Sample ID: LCS 440-249958/2**  
**Matrix: Water**  
**Analysis Batch: 249958**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	85.4	93.8		mg/L		110	80 - 120

**Lab Sample ID: 440-107260-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 249958**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Alkalinity as CaCO3	29		28.7		mg/L		0.2	20
Bicarbonate ion as HCO3	35		35.0		mg/L		0.2	20
Carbonate as CO3	ND		ND		mg/L		NC	20
Hydroxide as OH	ND		ND		mg/L		NC	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 440-249554/1**  
**Matrix: Water**  
**Analysis Batch: 249554**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			04/17/15 08:58	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 440-249554/2**  
**Matrix: Water**  
**Analysis Batch: 249554**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	986		mg/L		99	90 - 110

**Lab Sample ID: 440-106886-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 249554**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	270		266		mg/L		2	5

## Method: 9310 - Gross Alpha / Beta (GFPC)

**Lab Sample ID: MB 160-189677/1-A**  
**Matrix: Water**  
**Analysis Batch: 190171**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.3968	U	0.505	0.507	0.836	pCi/L	05/06/15 13:40	05/10/15 19:23	1
Gross Beta	0.8809		0.517	0.524	0.762	pCi/L	05/06/15 13:40	05/10/15 19:23	1

**Lab Sample ID: LCS 160-189677/2-A**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	50.0	51.33		7.69	1.90	pCi/L	103	73 - 133

**Lab Sample ID: LCSB 160-189677/3-A**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	95.1	94.63		10.0	1.05	pCi/L	100	75 - 125

**Lab Sample ID: 160-11454-A-1-F MS**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	5.32	G	82.0	94.11		14.1	3.44	pCi/L	108	35 - 150

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 9310 - Gross Alpha / Beta (GFPC) (Continued)

**Lab Sample ID: 160-11454-A-1-G MSBT**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	3.67		156	154.8		16.4	1.80	pCi/L	97	89 - 143

**Lab Sample ID: 160-11454-A-1-H DU**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	MDC	Unit	RER	RER Limit
Gross Alpha	5.32	G	3.871	U G	2.83	4.13	pCi/L	0.25	1
Gross Beta	3.67		3.249		1.25	1.61	pCi/L	0.16	1

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-186427/1-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05445	U	0.0501	0.0504	0.0789	pCi/L	04/17/15 13:41	05/11/15 07:32	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	107		40 - 110				04/17/15 13:41	05/11/15 07:32	1

**Lab Sample ID: LCS 160-186427/2-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	10.51		1.03	0.0726	pCi/L	94	68 - 137
<b>Carrier</b>	<b>%Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
Ba Carrier	110		40 - 110					

**Lab Sample ID: LCSD 160-186427/3-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	10.66		1.04	0.0871	pCi/L	95	68 - 137	0.07	1
<b>Carrier</b>	<b>%Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>							
Ba Carrier	107		40 - 110							

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
 SDG: LINN, Poso Creek - Desert Glow

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-186429/1-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.05587	U	0.179	0.179	0.328	pCi/L	04/17/15 13:54	05/04/15 10:28	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110	04/17/15 13:54	05/04/15 10:28	1
Y Carrier	92.0		40 - 110	04/17/15 13:54	05/04/15 10:28	1

**Lab Sample ID: LCS 160-186429/2-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-228	3.43	3.034		0.445	0.270	pCi/L	88	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	110		40 - 110
Y Carrier	90.8		40 - 110

**Lab Sample ID: LCSD 160-186429/3-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	3.43	3.100		0.477	0.356	pCi/L	90	56 - 140	0.07	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	107		40 - 110
Y Carrier	87.5		40 - 110

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## GC/MS VOA

### Analysis Batch: 249227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106792-D-5 MS	Matrix Spike	Total/NA	Water	8260B	
440-106792-D-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-107073-1	Desert Glow #1	Total/NA	Water	8260B	
LCS 440-249227/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-249227/4	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 249744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106770-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-106770-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-107073-2	Pond #2	Total/NA	Water	8260B	
LCS 440-249744/4	Lab Control Sample	Total/NA	Water	8260B	
MB 440-249744/3	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 249425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	3520C	
440-107073-2	Pond #2	Total/NA	Water	3520C	
LCS 440-249425/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 440-249425/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-249425/1-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 249919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	8270C SIM	249425
440-107073-2	Pond #2	Total/NA	Water	8270C SIM	249425
LCS 440-249425/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	249425
LCS 440-249425/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	249425
MB 440-249425/1-A	Method Blank	Total/NA	Water	8270C SIM	249425

## GC VOA

### Analysis Batch: 249061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106896-A-1 MS	Matrix Spike	Total/NA	Water	8015B	
440-106896-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
440-107073-2	Pond #2	Total/NA	Water	8015B	
LCS 440-249061/33	Lab Control Sample	Total/NA	Water	8015B	
MB 440-249061/4	Method Blank	Total/NA	Water	8015B	

### Analysis Batch: 249263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106767-D-1 MS	Matrix Spike	Total/NA	Water	8015B	
440-106767-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
440-107073-1	Desert Glow #1	Total/NA	Water	8015B	
LCS 440-249263/4	Lab Control Sample	Total/NA	Water	8015B	
MB 440-249263/5	Method Blank	Total/NA	Water	8015B	

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## GC Semi VOA

### Prep Batch: 249238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	3510C	
440-107073-2	Pond #2	Total/NA	Water	3510C	
LCS 440-249238/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-249238/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-249238/1-A	Method Blank	Total/NA	Water	3510C	

### Analysis Batch: 249239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-249238/2-A	Lab Control Sample	Total/NA	Water	8015B	249238
LCSD 440-249238/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	249238
MB 440-249238/1-A	Method Blank	Total/NA	Water	8015B	249238

### Analysis Batch: 249240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	8015B	249238
440-107073-2	Pond #2	Total/NA	Water	8015B	249238

## HPLC/IC

### Analysis Batch: 249001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107064-AC-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-107064-AC-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-107073-1	Desert Glow #1	Total/NA	Water	300.0	
440-107073-2	Pond #2	Total/NA	Water	300.0	
LCS 440-249001/2	Lab Control Sample	Total/NA	Water	300.0	
LCSD 440-249001/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-249001/4	Method Blank	Total/NA	Water	300.0	

### Analysis Batch: 249002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107064-AC-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-107064-AC-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-107073-1	Desert Glow #1	Total/NA	Water	300.0	
440-107073-1	Desert Glow #1	Total/NA	Water	300.0	
440-107073-2	Pond #2	Total/NA	Water	300.0	
440-107073-2	Pond #2	Total/NA	Water	300.0	
LCS 440-249002/2	Lab Control Sample	Total/NA	Water	300.0	
LCSD 440-249002/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-249002/4	Method Blank	Total/NA	Water	300.0	

## Metals

### Prep Batch: 189699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	3010A	
440-107073-1 MS	Desert Glow #1	Total/NA	Water	3010A	
440-107073-1 MSD	Desert Glow #1	Total/NA	Water	3010A	
440-107073-2	Pond #2	Total/NA	Water	3010A	
LCS 160-189699/2-A	Lab Control Sample	Total/NA	Water	3010A	

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Metals (Continued)

### Prep Batch: 189699 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-189699/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 190421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	6020A	189699
440-107073-1 MS	Desert Glow #1	Total/NA	Water	6020A	189699
440-107073-1 MSD	Desert Glow #1	Total/NA	Water	6020A	189699
440-107073-2	Pond #2	Total/NA	Water	6020A	189699
LCS 160-189699/2-A	Lab Control Sample	Total/NA	Water	6020A	189699
MB 160-189699/1-A	Method Blank	Total/NA	Water	6020A	189699

### Prep Batch: 249202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107024-H-6-B MS	Matrix Spike	Total/NA	Water	7470A	
440-107024-H-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
440-107073-1	Desert Glow #1	Total/NA	Water	7470A	
440-107073-2	Pond #2	Total/NA	Water	7470A	
LCS 440-249202/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-249202/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 249356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	3005A	
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
440-107073-1	Desert Glow #1	Total Recoverable	Water	3005A	
440-107073-2	Pond #2	Total Recoverable	Water	3005A	
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 249549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	6010B	249356
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249356
440-107073-1	Desert Glow #1	Total Recoverable	Water	6010B	249356
440-107073-2	Pond #2	Total Recoverable	Water	6010B	249356
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249356
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107024-H-6-B MS	Matrix Spike	Total/NA	Water	7470A	249202
440-107024-H-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	249202
440-107073-1	Desert Glow #1	Total/NA	Water	7470A	249202
440-107073-2	Pond #2	Total/NA	Water	7470A	249202
LCS 440-249202/2-A	Lab Control Sample	Total/NA	Water	7470A	249202
MB 440-249202/1-A	Method Blank	Total/NA	Water	7470A	249202

### Analysis Batch: 249594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	6010B	249356
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249356

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Metals (Continued)

### Analysis Batch: 249594 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249356
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total Recoverable	Water	6010B	249356
440-107073-2	Pond #2	Total Recoverable	Water	6010B	249356

## General Chemistry

### Analysis Batch: 249517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-2	Pond #2	Total/NA	Water	SM 2320B	
440-107181-A-2 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-249517/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-249517/3	Method Blank	Total/NA	Water	SM 2320B	

### Analysis Batch: 249554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106886-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-107073-1	Desert Glow #1	Total/NA	Water	SM 2540C	
440-107073-2	Pond #2	Total/NA	Water	SM 2540C	
LCS 440-249554/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-249554/1	Method Blank	Total/NA	Water	SM 2540C	

### Analysis Batch: 249958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	SM 2320B	
440-107260-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-249958/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-249958/3	Method Blank	Total/NA	Water	SM 2320B	

## Rad

### Prep Batch: 186427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	PrecSep-21	
440-107073-2	Pond #2	Total/NA	Water	PrecSep-21	
LCS 160-186427/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-186427/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-186427/1-A	Method Blank	Total/NA	Water	PrecSep-21	

### Prep Batch: 186429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107073-1	Desert Glow #1	Total/NA	Water	PrecSep_0	
440-107073-2	Pond #2	Total/NA	Water	PrecSep_0	
LCS 160-186429/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-186429/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-186429/1-A	Method Blank	Total/NA	Water	PrecSep_0	

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Rad (Continued)

### Prep Batch: 189677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11454-A-1-F MS	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-G MSBT	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-H DU	Duplicate	Total/NA	Water	Evaporation	
440-107073-1	Desert Glow #1	Total/NA	Water	Evaporation	
440-107073-2	Pond #2	Total/NA	Water	Evaporation	
LCS 160-189677/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-189677/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
MB 160-189677/1-A	Method Blank	Total/NA	Water	Evaporation	

# Definitions/Glossary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

### HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Certification Summary

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
 SDG: LINN, Poso Creek - Desert Glow

## Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

## Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-15
California	NELAP	9	2886	03-31-16
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-15
Illinois	NELAP	5	200023	11-30-15
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	04-30-15 *
Kentucky (DW)	State Program	4	90125	12-31-15
L-A-B	DoD ELAP		L2305	01-10-16
Louisiana	NELAP	6	04080	06-30-15
Louisiana (DW)	NELAP	6	LA150017	12-31-16
Maryland	State Program	3	310	09-30-15
Missouri	State Program	7	780	06-30-15
Nevada	State Program	9	MO000542013-1	07-31-15
New Jersey	NELAP	2	MO002	06-30-15
New Mexico	State Program	6		06-30-10 *
New York	NELAP	2	11616	03-31-16
North Dakota	State Program	8	R207	06-30-15
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-15
Pennsylvania	NELAP	3	68-00540	02-28-16
South Carolina	State Program	4	85002001	06-30-15
Texas	NELAP	6	T104704193-13-6	07-31-15
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542013-5	07-31-15
Virginia	NELAP	3	460230	06-14-15
Washington	State Program	10	C592	08-30-15
West Virginia DEP	State Program	3	381	08-31-15

\* Certification renewal pending - certification considered valid.



## Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-107073-1  
SDG Number: LINN, Poso Creek - Desert Glow

**Login Number: 107073**

**List Number: 1**

**Creator: Hsu, Janice**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Tracer/Carrier Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107073-1  
SDG: LINN, Poso Creek - Desert Glow

## Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)							
440-107073-1	Desert Glow #1	102							
440-107073-2	Pond #2	103							
LCS 160-186427/2-A	Lab Control Sample	110							
LCSD 160-186427/3-A	Lab Control Sample Dup	107							
MB 160-186427/1-A	Method Blank	107							

### Tracer/Carrier Legend

Ba = Ba Carrier

## Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)						
440-107073-1	Desert Glow #1	102	89.3						
440-107073-2	Pond #2	103	92.0						
LCS 160-186429/2-A	Lab Control Sample	110	90.8						
LCSD 160-186429/3-A	Lab Control Sample Dup	107	87.5						
MB 160-186429/1-A	Method Blank	107	92.0						

### Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

LABORATORY ANALYTICAL REPORT

MCVAN

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-107072-1

TestAmerica SDG: LINN, Poso Creek - McVan

Client Project/Site: RWQCB Pond Testing, 2015

Revision: 2

For:

Envirotech Consultants, Inc.

5400 Rosedale Highway

Bakersfield, California 93308

Attn: Jane McNaboe



Authorized for release by:

5/21/2015 5:18:18 PM

Janice Hsu, Project Manager I

(949)261-1022

[janice.hsu@testamericainc.com](mailto:janice.hsu@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Sample Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-107072-1	McVan (Pond #3)	Water	04/14/15 11:00	04/14/15 18:45

---

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

**Job ID: 440-107072-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-107072-1

#### Comments

Revised report to report result in pCi/L for Uranium.

#### Receipt

The samples were received on 4/14/2015 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.1° C, 5.2° C, 5.6° C and 5.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 249425. The LCS was performed in duplicate to provide precision for the batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC VOA

Method(s) 8015B: The following volatile sample was analyzed with significant headspace in the sample vial(s): McVan (Pond #3) (440-107072-1). Significant headspace is defined as a bubble greater than 6 mm in diameter. Sample arrived with significant headspace.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 249238. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.(LCS 440-249238/2-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The method blank for 249356 contained Maganasium above the reporting limit (RL). Associated sample was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.McVan (Pond #3) (440-107072-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Job ID: 440-107072-1 (Continued)

### Laboratory: TestAmerica Irvine (Continued)

#### Narrative

#### Job Narrative 440-107072-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/14/2015 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.1° C, 5.2° C, 5.6° C and 5.8° C.

#### RAD

Method(s) 9310: Gross alpha/beta Batch: 189677

The gross alpha and/or gross beta detection goals were not met for the following samples due to a reduction of the sample size which can be attributed to high residual mass: McVan (Pond #3) (440-107072-1), (160-11454-A-1-B) and (160-11454-A-1-H DU). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep-21: radium-228 batch #186429 and radium-226 batch #186427

The following samples were run at reduced aliquots: McVan (Pond #3) (440-107072-1).

440-107071-1 and 107073-2 were reduced to 250 mL because they were brown, had a foul odor, and there was oily residue on the inside of the sample bottles.

440-107072-1 and 107073-1 were reduced to 500 mL because they were yellow and had a foul odor.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6020A: 189452 - water. A-batch - 190430.

The following samples were diluted due to the nature of the sample matrix. The samples were high in salts, which cause internal standard and QC failures when the samples are run at a lesser dilution: McVan (Pond #3) (440-107072-1), (440-107072-R-1-B MS), (440-107072-R-1-C MSD) and (440-107072-R-1-A SD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

**Client Sample ID: McVan (Pond #3)**

**Lab Sample ID: 440-107072-1**

**Date Collected: 04/14/15 11:00**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			04/16/15 14:51	1
Ethylbenzene	ND		2.0		ug/L			04/16/15 14:51	1
m,p-Xylene	ND		2.0		ug/L			04/16/15 14:51	1
o-Xylene	ND		2.0		ug/L			04/16/15 14:51	1
Toluene	ND		2.0		ug/L			04/16/15 14:51	1
Xylenes, Total	ND		2.0		ug/L			04/16/15 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		04/16/15 14:51	1
4-Bromofluorobenzene (Surr)	99		80 - 120		04/16/15 14:51	1
Dibromofluoromethane (Surr)	104		76 - 132		04/16/15 14:51	1

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Acenaphthylene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Anthracene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Benzo[a]anthracene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Benzo[a]pyrene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Benzo[b]fluoranthene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Benzo[g,h,i]perylene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Benzo[k]fluoranthene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Chrysene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Dibenz(a,h)anthracene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Fluoranthene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Fluorene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Indeno[1,2,3-cd]pyrene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Naphthalene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Phenanthrene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1
Pyrene	ND		0.19		ug/L		04/16/15 17:25	04/20/15 16:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	59		31 - 120	04/16/15 17:25	04/20/15 16:21	1
Nitrobenzene-d5	69		25 - 133	04/16/15 17:25	04/20/15 16:21	1
Terphenyl-d14	82		10 - 120	04/16/15 17:25	04/20/15 16:21	1

### Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>GRO (C4-C12)</b>	<b>55</b>		50		ug/L			04/20/15 12:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		65 - 140		04/20/15 12:46	1

### Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C13-C22</b>	<b>7.1</b>		0.52		mg/L		04/16/15 06:37	04/16/15 11:48	1
<b>C23-C40</b>	<b>2.6</b>		0.52		mg/L		04/16/15 06:37	04/16/15 11:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	75		45 - 120	04/16/15 06:37	04/16/15 11:48	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

**Client Sample ID: McVan (Pond #3)**

**Lab Sample ID: 440-107072-1**

Date Collected: 04/14/15 11:00

Matrix: Water

Date Received: 04/14/15 18:45

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>1.1</b>		0.50		mg/L			04/15/15 17:40	1
Nitrate as NO3	ND		0.50		mg/L			04/15/15 17:40	1
<b>Chloride</b>	<b>91</b>		5.0		mg/L			04/15/15 17:56	10
<b>Sulfate</b>	<b>58</b>		5.0		mg/L			04/15/15 17:56	10

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:45	1
<b>Arsenic</b>	<b>0.043</b>		0.010		mg/L		04/16/15 13:12	04/17/15 12:45	1
<b>Barium</b>	<b>0.076</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:02	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Boron</b>	<b>0.94</b>		0.050		mg/L		04/16/15 13:12	04/17/15 08:02	1
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Calcium</b>	<b>37</b>		0.10		mg/L		04/16/15 13:12	04/17/15 08:02	1
Chromium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:02	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:02	1
Copper	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Iron</b>	<b>0.43</b>		0.040		mg/L		04/16/15 13:12	04/17/15 08:02	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 12:45	1
Lithium	ND		0.050		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Magnesium</b>	<b>2.7</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Manganese</b>	<b>0.48</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Molybdenum</b>	<b>0.055</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Nickel</b>	<b>0.014</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Potassium</b>	<b>4.7</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:02	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:45	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Sodium</b>	<b>150</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:02	1
<b>Strontium</b>	<b>0.29</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:02	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:45	1
<b>Vanadium</b>	<b>0.014</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:02	1
Zinc	ND		0.020		mg/L		04/16/15 13:12	04/17/15 08:02	1

### Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Uranium</b>	<b>2.0</b>	<b>J</b>	5.0	1.2	ug/L		05/05/15 15:19	05/12/15 03:42	10
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Uranium</b>	<b>1.4</b>	<b>J</b>	3.4	0.77	pCi/L		05/05/15 15:19	05/12/15 03:42	10

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/15/15 23:05	04/17/15 00:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>860</b>		10		mg/L			04/17/15 08:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>190</b>		4.0		mg/L			04/16/15 09:16	1
<b>Bicarbonate ion as HCO3</b>	<b>220</b>		4.8		mg/L			04/16/15 09:16	1
<b>Carbonate as CO3</b>	<b>7.1</b>		2.4		mg/L			04/16/15 09:16	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

**Client Sample ID: McVan (Pond #3)**

**Lab Sample ID: 440-107072-1**

**Date Collected: 04/14/15 11:00**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Hydroxide as OH	ND		1.4	mg/L			04/16/15 09:16	1

## Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	3.79	U G	6.15	6.17	10.5	pCi/L	05/06/15 13:40	05/11/15 07:30	1
Gross Beta	3.77		2.26	2.29	3.42	pCi/L	05/06/15 13:40	05/11/15 07:30	1

## Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.308		0.137	0.139	0.176	pCi/L	04/17/15 13:41	05/11/15 07:32	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.7		40 - 110				04/17/15 13:41	05/11/15 07:32	1

## Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.229	U	0.411	0.412	0.697	pCi/L	04/17/15 13:54	05/04/15 10:29	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	93.8		40 - 110				04/17/15 13:54	05/04/15 10:29	1
Y Carrier	92.0		40 - 110				04/17/15 13:54	05/04/15 10:29	1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.536828		0.430	0.435	0.697	pCi/L		05/13/15 19:28	1

# Method Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
6020A	Metals (ICP/MS)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
9310	Gross Alpha / Beta (GFPC)	SW846	TAL SL
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

#### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Lab Chronicle

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

**Client Sample ID: McVan (Pond #3)**

**Lab Sample ID: 440-107072-1**

**Date Collected: 04/14/15 11:00**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	249227	04/16/15 14:51	SS	TAL IRV
Total/NA	Prep	3520C			1040 mL	1 mL	249425	04/16/15 17:25	AK	TAL IRV
Total/NA	Analysis	8270C SIM		1	1040 mL	1 mL	249919	04/20/15 16:21	AI	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	249876	04/20/15 12:46	AT	TAL IRV
Total/NA	Prep	3510C			955 mL	1 mL	249238	04/16/15 06:37	AP	TAL IRV
Total/NA	Analysis	8015B		1	955 mL	1 mL	249240	04/16/15 11:48	CN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL		249001	04/15/15 17:40	NN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL		249002	04/15/15 17:40	NN	TAL IRV
Total/NA	Analysis	300.0		10	5 mL		249002	04/15/15 17:56	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249549	04/17/15 08:02	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249626	04/17/15 12:45	VS	TAL IRV
Total/NA	Prep	3010A			50 mL	50 mL	189452	05/05/15 15:19	DAS	TAL SL
Total/NA	Analysis	6020A		10	50 mL	50 mL	190430	05/12/15 03:42	CCB	TAL SL
Total/NA	Prep	7470A			20 mL	20 mL	249202	04/15/15 23:05	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	249571	04/17/15 00:10	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			249489	04/16/15 09:16	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	249554	04/17/15 08:58	XL	TAL IRV
Total/NA	Prep	Evaporation			61 mL	1.0 g	189677	05/06/15 13:40	SCB	TAL SL
Total/NA	Analysis	9310		1	61 mL		190263	05/11/15 07:30	MLK	TAL SL
Total/NA	Prep	PrecSep-21			502.01 mL	1.0 g	186427	04/17/15 13:41	LEM	TAL SL
Total/NA	Analysis	9315		1	502.01 mL		190225	05/11/15 07:32	MLK	TAL SL
Total/NA	Prep	PrecSep_0			502.01 mL	1.0 g	186429	04/17/15 13:54	LEM	TAL SL
Total/NA	Analysis	9320		1	502.01 mL		189176	05/04/15 10:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			190710	05/13/15 19:28	RTM	TAL SL

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-249227/4**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			04/16/15 07:57	1
Ethylbenzene	ND		2.0		ug/L			04/16/15 07:57	1
m,p-Xylene	ND		2.0		ug/L			04/16/15 07:57	1
o-Xylene	ND		2.0		ug/L			04/16/15 07:57	1
Toluene	ND		2.0		ug/L			04/16/15 07:57	1
Xylenes, Total	ND		2.0		ug/L			04/16/15 07:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		04/16/15 07:57	1
4-Bromofluorobenzene (Surr)	102		80 - 120		04/16/15 07:57	1
Dibromofluoromethane (Surr)	106		76 - 132		04/16/15 07:57	1

**Lab Sample ID: LCS 440-249227/5**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.5		ug/L		98	68 - 130
Ethylbenzene	25.0	23.5		ug/L		94	70 - 130
m,p-Xylene	25.0	23.8		ug/L		95	70 - 130
o-Xylene	25.0	24.4		ug/L		98	70 - 130
Toluene	25.0	23.3		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-106792-D-5 MS**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	480	F1	125	594		ug/L		93	66 - 130
Ethylbenzene	150		125	266		ug/L		90	70 - 130
m,p-Xylene	430	F1	125	552		ug/L		101	70 - 133
o-Xylene	190		125	315		ug/L		100	70 - 133
Toluene	530	E	125	628	E 4	ug/L		79	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-106792-D-5 MSD**

**Matrix: Water**

**Analysis Batch: 249227**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	480	F1	125	556	F1	ug/L		62	66 - 130	7	20
Ethylbenzene	150		125	250		ug/L		78	70 - 130	6	20
m,p-Xylene	430	F1	125	506	F1	ug/L		64	70 - 133	9	25
o-Xylene	190		125	292		ug/L		82	70 - 133	7	20
Toluene	530	E	125	584	E 4	ug/L		44	70 - 130	7	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 440-249425/1-A**

**Matrix: Water**

**Analysis Batch: 249919**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 249425**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Acenaphthylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[a]anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[a]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[b]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[k]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Chrysene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Fluorene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Naphthalene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Phenanthrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		31 - 120	04/16/15 17:25	04/20/15 12:14	1
Nitrobenzene-d5	75		25 - 133	04/16/15 17:25	04/20/15 12:14	1
Terphenyl-d14	81		10 - 120	04/16/15 17:25	04/20/15 12:14	1

**Lab Sample ID: LCS 440-249425/2-A**

**Matrix: Water**

**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 249425**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.00	0.740		ug/L		74	47 - 103
Acenaphthylene	1.00	0.735		ug/L		73	45 - 102

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 440-249425/2-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	1.00	0.731		ug/L		73	47 - 111
Benzo[a]anthracene	1.00	0.801		ug/L		80	56 - 110
Benzo[a]pyrene	1.00	0.741		ug/L		74	48 - 110
Benzo[b]fluoranthene	1.00	0.879		ug/L		88	53 - 116
Benzo[g,h,i]perylene	1.00	1.01		ug/L		101	44 - 130
Benzo[k]fluoranthene	1.00	0.868		ug/L		87	51 - 127
Chrysene	1.00	0.842		ug/L		84	52 - 118
Dibenz(a,h)anthracene	1.00	0.928		ug/L		93	44 - 125
Fluoranthene	1.00	0.860		ug/L		86	51 - 116
Fluorene	1.00	0.786		ug/L		79	50 - 106
Indeno[1,2,3-cd]pyrene	1.00	0.966		ug/L		97	41 - 127
Naphthalene	1.00	0.721		ug/L		72	40 - 100
Phenanthrene	1.00	0.812		ug/L		81	49 - 110
Pyrene	1.00	0.839		ug/L		84	41 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	76		31 - 120
Nitrobenzene-d5	79		25 - 133
Terphenyl-d14	78		10 - 120

**Lab Sample ID: LCSD 440-249425/3-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	1.00	0.828		ug/L		83	47 - 103	11	35
Acenaphthylene	1.00	0.824		ug/L		82	45 - 102	11	35
Anthracene	1.00	0.842		ug/L		84	47 - 111	14	35
Benzo[a]anthracene	1.00	0.885		ug/L		88	56 - 110	10	35
Benzo[a]pyrene	1.00	0.826		ug/L		83	48 - 110	11	35
Benzo[b]fluoranthene	1.00	0.947		ug/L		95	53 - 116	7	35
Benzo[g,h,i]perylene	1.00	1.08		ug/L		108	44 - 130	6	35
Benzo[k]fluoranthene	1.00	0.928		ug/L		93	51 - 127	7	35
Chrysene	1.00	0.912		ug/L		91	52 - 118	8	35
Dibenz(a,h)anthracene	1.00	0.985		ug/L		98	44 - 125	6	35
Fluoranthene	1.00	0.932		ug/L		93	51 - 116	8	35
Fluorene	1.00	0.859		ug/L		86	50 - 106	9	35
Indeno[1,2,3-cd]pyrene	1.00	0.997		ug/L		100	41 - 127	3	35
Naphthalene	1.00	0.776		ug/L		78	40 - 100	7	35
Phenanthrene	1.00	0.893		ug/L		89	49 - 110	10	35
Pyrene	1.00	0.904		ug/L		90	41 - 115	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		31 - 120
Nitrobenzene-d5	80		25 - 133
Terphenyl-d14	81		10 - 120

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 8015B - Gasoline Range Organics - (GC)

**Lab Sample ID: MB 440-249876/5**  
**Matrix: Water**  
**Analysis Batch: 249876**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			04/20/15 08:54	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	102		65 - 140				04/20/15 08:54	1	

**Lab Sample ID: LCS 440-249876/4**  
**Matrix: Water**  
**Analysis Batch: 249876**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
GRO (C4-C12)	800	873		ug/L		109	80 - 120	
Surrogate	%Recovery	LCS Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		65 - 140					

**Lab Sample ID: 440-107254-D-7 MS**  
**Matrix: Water**  
**Analysis Batch: 249876**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	990		1600	2380		ug/L		86	65 - 140
Surrogate	%Recovery	MS Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	100		65 - 140						

**Lab Sample ID: 440-107254-D-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 249876**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	990		1600	2490		ug/L		94	65 - 140	5	20
Surrogate	%Recovery	MSD Qualifier	Limits			Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	101		65 - 140								

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 440-249238/1-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		0.50		mg/L		04/16/15 06:37	04/16/15 11:08	1
C23-C40	ND		0.50		mg/L		04/16/15 06:37	04/16/15 11:08	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: MB 440-249238/1-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Surrogate	<i>MB</i> %Recovery	<i>MB</i> Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane	69		45 - 120	04/16/15 06:37	04/16/15 11:08	1

**Lab Sample ID: LCS 440-249238/2-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	1.00	0.660		mg/L		66	40 - 115

Surrogate	<i>LCS</i> %Recovery	<i>LCS</i> Qualifier	Limits
<i>n</i> -Octacosane	68		45 - 120

**Lab Sample ID: LCSD 440-249238/3-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	1.00	0.643		mg/L		64	40 - 115	3	25

Surrogate	<i>LCSD</i> %Recovery	<i>LCSD</i> Qualifier	Limits
<i>n</i> -Octacosane	68		45 - 120

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-249001/4**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	<i>MB</i> Result	<i>MB</i> Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as NO3	ND		0.50		mg/L			04/15/15 12:12	1

**Lab Sample ID: LCS 440-249001/2**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	5.00	5.03		mg/L		101	90 - 110

**Lab Sample ID: LCSD 440-249001/6**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	5.00	5.08		mg/L		102	90 - 110	1	20

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-107064-AC-2 MS**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	ND		50.0	55.4		mg/L		111	80 - 120

**Lab Sample ID: 440-107064-AC-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	ND		50.0	55.1		mg/L		110	80 - 120	1	20

**Lab Sample ID: MB 440-249002/4**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			04/15/15 12:12	1
Chloride	ND		0.50		mg/L			04/15/15 12:12	1
Sulfate	ND		0.50		mg/L			04/15/15 12:12	1

**Lab Sample ID: LCS 440-249002/2**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.06		mg/L		101	90 - 110
Chloride	5.00	4.90		mg/L		98	90 - 110
Fluoride	5.00	4.51		mg/L		90	90 - 110
Sulfate	5.00	4.73		mg/L		95	90 - 110

**Lab Sample ID: LCSD 440-249002/6**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	5.00	5.10		mg/L		102	90 - 110	1	20
Chloride	5.00	5.03		mg/L		100	90 - 110	2	20
Fluoride	5.00	4.64		mg/L		93	90 - 110	3	20
Sulfate	5.00	5.00		mg/L		100	90 - 110	6	20

**Lab Sample ID: 440-107064-AC-2 MS**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		50.0	57.7		mg/L		115	80 - 120
Chloride	120		50.0	161		mg/L		88	80 - 120
Fluoride	ND		50.0	53.4		mg/L		107	80 - 120
Sulfate	670		50.0	673	4	mg/L		7	80 - 120

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-107064-AC-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		50.0	56.6		mg/L		113	80 - 120	2	20
Chloride	120		50.0	157		mg/L		81	80 - 120	2	20
Fluoride	ND		50.0	53.3		mg/L		107	80 - 120	0	20
Sulfate	670		50.0	651	4	mg/L		-37	80 - 120	3	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Boron	ND		0.050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Calcium	ND		0.10		mg/L		04/16/15 13:12	04/17/15 07:04	1
Chromium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Copper	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Iron	ND		0.040		mg/L		04/16/15 13:12	04/17/15 07:04	1
Lithium	ND		0.050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Magnesium	0.0308		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Manganese	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Molybdenum	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Nickel	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Potassium	ND		0.50		mg/L		04/16/15 13:12	04/17/15 07:04	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Sodium	ND		0.50		mg/L		04/16/15 13:12	04/17/15 07:04	1
Strontium	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Vanadium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Zinc	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Arsenic	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 10:46	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
 SDG: LINN, Poso Creek - McVan

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 440-249356/2-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	1.00	0.996		mg/L		100	80 - 120
Beryllium	1.00	1.01		mg/L		101	80 - 120
Boron	1.00	0.986		mg/L		99	80 - 120
Cadmium	1.00	0.996		mg/L		100	80 - 120
Calcium	5.00	5.12		mg/L		102	80 - 120
Chromium	1.00	0.985		mg/L		99	80 - 120
Cobalt	1.00	0.999		mg/L		100	80 - 120
Copper	1.00	0.987		mg/L		99	80 - 120
Iron	1.00	1.06		mg/L		106	80 - 120
Lithium	1.00	0.974		mg/L		97	80 - 120
Magnesium	5.00	5.00		mg/L		100	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Molybdenum	1.00	0.987		mg/L		99	80 - 120
Nickel	1.00	1.00		mg/L		100	80 - 120
Potassium	10.0	9.95		mg/L		100	80 - 120
Silver	0.500	0.478		mg/L		96	80 - 120
Sodium	10.0	9.79		mg/L		98	80 - 120
Strontium	1.00	0.994		mg/L		99	80 - 120
Vanadium	1.00	0.975		mg/L		98	80 - 120
Zinc	1.00	0.954		mg/L		95	80 - 120

**Lab Sample ID: LCS 440-249356/2-A**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	0.985		mg/L		98	80 - 120
Arsenic	1.00	0.967		mg/L		97	80 - 120
Lead	1.00	0.960		mg/L		96	80 - 120
Selenium	1.00	0.909		mg/L		91	80 - 120
Thallium	1.00	0.920		mg/L		92	80 - 120

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	0.18		1.00	1.15		mg/L		97	75 - 125
Beryllium	ND		1.00	1.01		mg/L		101	75 - 125
Boron	0.14		1.00	1.16		mg/L		102	75 - 125
Cadmium	ND		1.00	0.964		mg/L		96	75 - 125
Calcium	120		5.00	125	4	mg/L		41	75 - 125
Chromium	0.0066		1.00	0.986		mg/L		98	75 - 125
Cobalt	ND		1.00	0.944		mg/L		94	75 - 125
Copper	ND		1.00	1.01		mg/L		101	75 - 125
Iron	2.7	F1	1.00	3.33	F1	mg/L		64	75 - 125
Lithium	ND		1.00	0.858		mg/L		86	75 - 125
Magnesium	49		5.00	52.9	4	mg/L		70	75 - 125

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result			Result	Qualifier				
Manganese	0.034		1.00	0.987		mg/L		95	75 - 125
Molybdenum	ND		1.00	0.983		mg/L		98	75 - 125
Nickel	ND		1.00	0.956		mg/L		96	75 - 125
Potassium	2.6		10.0	12.5		mg/L		99	75 - 125
Silver	ND		0.500	0.492		mg/L		98	75 - 125
Sodium	130		10.0	141	4	mg/L		68	75 - 125
Strontium	0.81		1.00	1.79		mg/L		98	75 - 125
Vanadium	0.031		1.00	1.02		mg/L		99	75 - 125
Zinc	ND		1.00	0.955		mg/L		94	75 - 125

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result			Result	Qualifier				
Antimony	ND		1.00	0.978		mg/L		98	75 - 125
Arsenic	ND		1.00	0.973		mg/L		97	75 - 125
Lead	ND		1.00	0.890		mg/L		89	75 - 125
Selenium	ND		1.00	0.883		mg/L		88	75 - 125
Thallium	ND		1.00	0.841		mg/L		84	75 - 125

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result			Result	Qualifier						
Barium	0.18		1.00	1.11		mg/L		94	75 - 125	3	20
Beryllium	ND		1.00	0.992		mg/L		99	75 - 125	2	20
Boron	0.14		1.00	1.11		mg/L		98	75 - 125	4	20
Cadmium	ND		1.00	0.928		mg/L		93	75 - 125	4	20
Calcium	120		5.00	124	4	mg/L		13	75 - 125	1	20
Chromium	0.0066		1.00	0.942		mg/L		94	75 - 125	4	20
Cobalt	ND		1.00	0.917		mg/L		92	75 - 125	3	20
Copper	ND		1.00	0.979		mg/L		98	75 - 125	3	20
Iron	2.7	F1	1.00	3.36	F1	mg/L		67	75 - 125	1	20
Lithium	ND		1.00	0.845		mg/L		85	75 - 125	1	20
Magnesium	49		5.00	52.7	4	mg/L		64	75 - 125	1	20
Manganese	0.034		1.00	0.973		mg/L		94	75 - 125	1	20
Molybdenum	ND		1.00	0.960		mg/L		96	75 - 125	2	20
Nickel	ND		1.00	0.918		mg/L		92	75 - 125	4	20
Potassium	2.6		10.0	12.3		mg/L		97	75 - 125	2	20
Silver	ND		0.500	0.475		mg/L		95	75 - 125	3	20
Sodium	130		10.0	139	4	mg/L		50	75 - 125	1	20
Strontium	0.81		1.00	1.76		mg/L		95	75 - 125	2	20
Vanadium	0.031		1.00	0.988		mg/L		96	75 - 125	3	20
Zinc	ND		1.00	0.917		mg/L		91	75 - 125	4	20

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	ND		1.00	1.00		mg/L		100	75 - 125	2	20
Arsenic	ND		1.00	1.01		mg/L		101	75 - 125	3	20
Lead	ND		1.00	0.915		mg/L		92	75 - 125	3	20
Selenium	ND		1.00	0.916		mg/L		92	75 - 125	4	20
Thallium	ND		1.00	0.867		mg/L		87	75 - 125	3	20

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 160-189452/1-A**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<1.0		1.0	0.23	ug/L		05/05/15 15:19	05/12/15 02:20	2

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.67		0.67	0.15	pCi/L		05/05/15 15:19	05/12/15 02:20	2

**Lab Sample ID: LCS 160-189452/2-A**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Uranium	1000	1170		ug/L		117	80 - 120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Uranium	670	784		pCi/L		117	80 - 120

**Lab Sample ID: 440-107072-1 MS**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: McVan (Pond #3)**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	2.0	J	1000	1000		ug/L		100	75 - 125

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	1.4	J	670	673		pCi/L		100	75 - 125

**Lab Sample ID: 440-107072-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: McVan (Pond #3)**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Uranium	2.0	J	1000	1020		ug/L		101	75 - 125	1	20

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Uranium	1.4	J	670	681		pCi/L		101	75 - 125	1	20

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
 SDG: LINN, Poso Creek - McVan

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 440-249202/1-A**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/15/15 23:05	04/16/15 23:45	1

**Lab Sample ID: LCS 440-249202/2-A**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00800	0.00851		mg/L		106	80 - 120

**Lab Sample ID: 440-107024-H-6-B MS**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.00800	0.00948		mg/L		118	70 - 130

**Lab Sample ID: 440-107024-H-6-C MSD**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00800	0.00936		mg/L		117	70 - 130	1	20

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-249489/3**  
**Matrix: Water**  
**Analysis Batch: 249489**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			04/16/15 06:35	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			04/16/15 06:35	1
Carbonate as CO3	ND		2.4		mg/L			04/16/15 06:35	1
Hydroxide as OH	ND		1.4		mg/L			04/16/15 06:35	1

**Lab Sample ID: LCS 440-249489/2**  
**Matrix: Water**  
**Analysis Batch: 249489**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Alkalinity as CaCO3	85.4	86.4		mg/L		101	80 - 120

**Lab Sample ID: 440-107093-B-1 DU**  
**Matrix: Water**  
**Analysis Batch: 249489**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Alkalinity as CaCO3	380		381		mg/L		0.06	20
Bicarbonate ion as HCO3	460		465		mg/L		0.06	20

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 440-107093-B-1 DU  
Matrix: Water  
Analysis Batch: 249489

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Carbonate as CO3	ND		ND		mg/L		NC	20
Hydroxide as OH	ND		ND		mg/L		NC	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-249554/1  
Matrix: Water  
Analysis Batch: 249554

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			04/17/15 08:58	1

Lab Sample ID: LCS 440-249554/2  
Matrix: Water  
Analysis Batch: 249554

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	986		mg/L		99	90 - 110

Lab Sample ID: 440-106858-A-1 DU  
Matrix: Water  
Analysis Batch: 249554

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1300		1300		mg/L		0.2	5

## Method: 9310 - Gross Alpha / Beta (GFPC)

Lab Sample ID: MB 160-189677/1-A  
Matrix: Water  
Analysis Batch: 190171

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 189677

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.3968	U	0.505	0.507	0.836	pCi/L	05/06/15 13:40	05/10/15 19:23	1
Gross Beta	0.8809		0.517	0.524	0.762	pCi/L	05/06/15 13:40	05/10/15 19:23	1

Lab Sample ID: LCS 160-189677/2-A  
Matrix: Water  
Analysis Batch: 190172

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 189677

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	50.0	51.33		7.69	1.90	pCi/L	103	73 - 133

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 9310 - Gross Alpha / Beta (GFPC) (Continued)

**Lab Sample ID: LCSB 160-189677/3-A**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	95.1	94.63		10.0	1.05	pCi/L	100	75 - 125

**Lab Sample ID: 160-11454-A-1-F MS**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	5.32	G	82.0	94.11		14.1	3.44	pCi/L	108	35 - 150

**Lab Sample ID: 160-11454-A-1-G MSBT**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	3.67		156	154.8		16.4	1.80	pCi/L	97	89 - 143

**Lab Sample ID: 160-11454-A-1-H DU**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	MDC	Unit	RER	RER Limit
Gross Alpha	5.32	G	3.871	U G	2.83	4.13	pCi/L	0.25	1
Gross Beta	3.67		3.249		1.25	1.61	pCi/L	0.16	1

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-186427/1-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05445	U	0.0501	0.0504	0.0789	pCi/L	04/17/15 13:41	05/11/15 07:32	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	107		40 - 110				04/17/15 13:41	05/11/15 07:32	1

**Lab Sample ID: LCS 160-186427/2-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	10.51		1.03	0.0726	pCi/L	94	68 - 137

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 9315 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-186427/2-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	110		40 - 110

**Lab Sample ID: LCSD 160-186427/3-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	10.66		1.04	0.0871	pCi/L	95	68 - 137	0.07	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	107		40 - 110

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-186429/1-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.05587	U	0.179	0.179	0.328	pCi/L	04/17/15 13:54	05/04/15 10:28	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110	04/17/15 13:54	05/04/15 10:28	1
Y Carrier	92.0		40 - 110	04/17/15 13:54	05/04/15 10:28	1

**Lab Sample ID: LCS 160-186429/2-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-228	3.43	3.034		0.445	0.270	pCi/L	88	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	110		40 - 110
Y Carrier	90.8		40 - 110

**Lab Sample ID: LCSD 160-186429/3-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	3.43	3.100		0.477	0.356	pCi/L	90	56 - 140	0.07	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-186429/3-A

Matrix: Water

Analysis Batch: 189176

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 186429

<i>Carrier</i>	<i>LCSD %Yield</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	107		40 - 110
<i>Y Carrier</i>	87.5		40 - 110

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# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## GC/MS VOA

### Analysis Batch: 249227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106792-D-5 MS	Matrix Spike	Total/NA	Water	8260B	
440-106792-D-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-107072-1	McVan (Pond #3)	Total/NA	Water	8260B	
LCS 440-249227/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-249227/4	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 249425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	3520C	
LCS 440-249425/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-249425/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-249425/1-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 249919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	8270C SIM	249425
LCS 440-249425/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	249425
LCSD 440-249425/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	249425
MB 440-249425/1-A	Method Blank	Total/NA	Water	8270C SIM	249425

## GC VOA

### Analysis Batch: 249876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	8015B	
440-107254-D-7 MS	Matrix Spike	Total/NA	Water	8015B	
440-107254-D-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
LCS 440-249876/4	Lab Control Sample	Total/NA	Water	8015B	
MB 440-249876/5	Method Blank	Total/NA	Water	8015B	

## GC Semi VOA

### Prep Batch: 249238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	3510C	
LCS 440-249238/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-249238/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-249238/1-A	Method Blank	Total/NA	Water	3510C	

### Analysis Batch: 249239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-249238/2-A	Lab Control Sample	Total/NA	Water	8015B	249238
LCSD 440-249238/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	249238
MB 440-249238/1-A	Method Blank	Total/NA	Water	8015B	249238

### Analysis Batch: 249240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	8015B	249238

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## HPLC/IC

### Analysis Batch: 249001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107064-AC-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-107064-AC-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-107072-1	McVan (Pond #3)	Total/NA	Water	300.0	
LCS 440-249001/2	Lab Control Sample	Total/NA	Water	300.0	
LCSD 440-249001/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-249001/4	Method Blank	Total/NA	Water	300.0	

### Analysis Batch: 249002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107064-AC-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-107064-AC-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-107072-1	McVan (Pond #3)	Total/NA	Water	300.0	
440-107072-1	McVan (Pond #3)	Total/NA	Water	300.0	
LCS 440-249002/2	Lab Control Sample	Total/NA	Water	300.0	
LCSD 440-249002/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-249002/4	Method Blank	Total/NA	Water	300.0	

## Metals

### Prep Batch: 189452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	3010A	
440-107072-1 MS	McVan (Pond #3)	Total/NA	Water	3010A	
440-107072-1 MSD	McVan (Pond #3)	Total/NA	Water	3010A	
LCS 160-189452/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-189452/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 190430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	6020A	189452
440-107072-1 MS	McVan (Pond #3)	Total/NA	Water	6020A	189452
440-107072-1 MSD	McVan (Pond #3)	Total/NA	Water	6020A	189452
LCS 160-189452/2-A	Lab Control Sample	Total/NA	Water	6020A	189452
MB 160-189452/1-A	Method Blank	Total/NA	Water	6020A	189452

### Prep Batch: 249202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107024-H-6-B MS	Matrix Spike	Total/NA	Water	7470A	
440-107024-H-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
440-107072-1	McVan (Pond #3)	Total/NA	Water	7470A	
LCS 440-249202/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-249202/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 249356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	3005A	
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
440-107072-1	McVan (Pond #3)	Total Recoverable	Water	3005A	
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Metals (Continued)

### Analysis Batch: 249549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	6010B	249356
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249356
440-107072-1	McVan (Pond #3)	Total Recoverable	Water	6010B	249356
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249356
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107024-H-6-B MS	Matrix Spike	Total/NA	Water	7470A	249202
440-107024-H-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	249202
440-107072-1	McVan (Pond #3)	Total/NA	Water	7470A	249202
LCS 440-249202/2-A	Lab Control Sample	Total/NA	Water	7470A	249202
MB 440-249202/1-A	Method Blank	Total/NA	Water	7470A	249202

### Analysis Batch: 249594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	6010B	249356
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249356
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249356
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total Recoverable	Water	6010B	249356

## General Chemistry

### Analysis Batch: 249489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	SM 2320B	
440-107093-B-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-249489/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-249489/3	Method Blank	Total/NA	Water	SM 2320B	

### Analysis Batch: 249554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106858-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-107072-1	McVan (Pond #3)	Total/NA	Water	SM 2540C	
LCS 440-249554/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-249554/1	Method Blank	Total/NA	Water	SM 2540C	

## Rad

### Prep Batch: 186427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	PrecSep-21	
LCS 160-186427/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-186427/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-186427/1-A	Method Blank	Total/NA	Water	PrecSep-21	

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Rad (Continued)

### Prep Batch: 186429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107072-1	McVan (Pond #3)	Total/NA	Water	PrecSep_0	
LCS 160-186429/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-186429/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-186429/1-A	Method Blank	Total/NA	Water	PrecSep_0	

### Prep Batch: 189677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11454-A-1-F MS	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-G MSBT	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-H DU	Duplicate	Total/NA	Water	Evaporation	
440-107072-1	McVan (Pond #3)	Total/NA	Water	Evaporation	
LCS 160-189677/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-189677/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
MB 160-189677/1-A	Method Blank	Total/NA	Water	Evaporation	

# Definitions/Glossary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

### HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Certification Summary

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
 SDG: LINN, Poso Creek - McVan

## Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

## Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-15
California	NELAP	9	2886	03-31-16
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-15
Illinois	NELAP	5	200023	11-30-15
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	04-30-15 *
Kentucky (DW)	State Program	4	90125	12-31-15
L-A-B	DoD ELAP		L2305	01-10-16
Louisiana	NELAP	6	04080	06-30-15
Louisiana (DW)	NELAP	6	LA150017	12-31-16
Maryland	State Program	3	310	09-30-15
Missouri	State Program	7	780	06-30-15
Nevada	State Program	9	MO000542013-1	07-31-15
New Jersey	NELAP	2	MO002	06-30-15
New Mexico	State Program	6		06-30-10 *
New York	NELAP	2	11616	03-31-16
North Dakota	State Program	8	R207	06-30-15
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-15
Pennsylvania	NELAP	3	68-00540	02-28-16
South Carolina	State Program	4	85002001	06-30-15
Texas	NELAP	6	T104704193-13-6	07-31-15
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542013-5	07-31-15
Virginia	NELAP	3	460230	06-14-15
Washington	State Program	10	C592	08-30-15
West Virginia DEP	State Program	3	381	08-31-15

\* Certification renewal pending - certification considered valid.



## Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-107072-1  
SDG Number: LINN, Poso Creek - McVan

**Login Number: 107072**

**List Number: 1**

**Creator: Hsu, Janice**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Tracer/Carrier Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107072-1  
SDG: LINN, Poso Creek - McVan

## Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)							
440-107072-1	McVan (Pond #3)	94.7							
LCS 160-186427/2-A	Lab Control Sample	110							
LCSD 160-186427/3-A	Lab Control Sample Dup	107							
MB 160-186427/1-A	Method Blank	107							

### Tracer/Carrier Legend

Ba = Ba Carrier

## Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)						
440-107072-1	McVan (Pond #3)	93.8	92.0						
LCS 160-186429/2-A	Lab Control Sample	110	90.8						
LCSD 160-186429/3-A	Lab Control Sample Dup	107	87.5						
MB 160-186429/1-A	Method Blank	107	92.0						

### Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

LABORATORY ANALYTICAL REPORT

BERRY & EWING

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-107071-1

TestAmerica SDG: LINN, Midway Sunset Berry & Ewing

Client Project/Site: RWQCB Pond Testing, 2015

Revision: 2

For:

Envirotech Consultants, Inc.

5400 Rosedale Highway

Bakersfield, California 93308

Attn: Jane McNaboe



Authorized for release by:

5/21/2015 5:13:32 PM

Janice Hsu, Project Manager I

(949)261-1022

[janice.hsu@testamericainc.com](mailto:janice.hsu@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Sample Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-107071-1	Berry & Ewing (Pond #4)	Water	04/14/15 14:30	04/14/15 18:45

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# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

**Job ID: 440-107071-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-107071-1

#### Comments

Revised report to report result in pCi/L for Uranium.

#### Receipt

The samples were received on 4/14/2015 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.1° C, 5.2° C, 5.6° C and 5.8° C.

#### GC/MS VOA

Method(s) 8260B: The following volatile sample was analyzed with significant headspace in the sample vial due to sample was received with headspace: Berry & Ewing (Pond #4) (440-107071-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH=5 was outside the required criteria when verified by the laboratory, and corrective action was not possible: Berry & Ewing (Pond #4) (440-107071-1).

Method(s) 8260B: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: Berry & Ewing (Pond #4) (440-107071-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following sample required a dilution due to the nature of the sample matrix: Berry & Ewing (Pond #4) (440-107071-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 249425. The LCS was performed in duplicate to provide precision for the batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### HPLC/IC

Method(s) 300.0: The following sample was diluted for Fluoride due to the nature of the sample matrix (pH above 12): Berry & Ewing (Pond #4) (440-107071-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample was diluted due to the nature of the sample matrix for Nitrate (pH above 12): Berry & Ewing (Pond #4) (440-107071-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 249238. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.(LCS 440-249238/2-A)

Method(s) 8015B: The following sample required a dilution due to the nature of the sample matrix: Berry & Ewing (Pond #4) (440-107071-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Job ID: 440-107071-1 (Continued)

### Laboratory: TestAmerica Irvine (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The method blank for 249356 contained Maganasium above the reporting limit (RL). Associated sample was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank. Berry & Ewing (Pond #4) (440-107071-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Narrative

#### Job Narrative 440-107071-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/14/2015 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 5.1° C, 5.2° C, 5.6° C and 5.8° C.

#### RAD

Method(s) 9310: Gross alpha/beta Batch: 189677

The gross alpha and/or gross beta detection goals were not met for the following samples due to a reduction of the sample size which can be attributed to high residual mass: Berry & Ewing (Pond #4) (440-107071-1), (160-11454-A-1-B) and (160-11454-A-1-H DU). Analytical results are reported with the detection limit achieved.

Method(s) 9320: Radium-228 prep batch# 186429

The following samples did not meet the radium-228 detection goal due to the reduced sample volume attributed to matrix interferences (see prep NCM 54810). The data have been qualified and reported. Berry & Ewing (Pond #4) (440-107071-1)

Method(s) PrecSep-21: radium-228 batch #186429 and radium-226 batch #186427

The following samples were run at reduced aliquots: Berry & Ewing (Pond #4) (440-107071-1).

440-107071-1 and 107073-2 were reduced to 250 mL because they were brown, had a foul odor, and there was oily residue on the inside of the sample bottles.

440-107072-1 and 107073-1 were reduced to 500 mL because they were yellow and had a foul odor.

Method(s) PrecSep-21: radium-228 batch #186429 and radium-226 batch #186427

The barium sulfate pellet that resulted from sample Berry & Ewing (Pond #4) (440-107071-1) appeared to be slightly smaller than that of the QC when this samples were put into ingrowth. The sample was oily and the pellet was hard to break up during the nitric and water washes.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 3010A: Prep 189452

A 2 X dilution was performed on sample 440-107071 due to the difficult matrix of the sample.

Berry & Ewing (Pond #4) (440-107071-1)

# Case Narrative

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

---

## Job ID: 440-107071-1 (Continued)

---

### Laboratory: TestAmerica Irvine (Continued)

Method(s) 6020A: 189452 - water. A-batch - 190430.

The following samples were diluted due to the nature of the sample matrix. The samples were high in salts, which cause internal standard and QC failures when the samples are run at a lesser dilution: Berry & Ewing (Pond #4) (440-107071-1), (440-107072-R-1-A), (440-107072-R-1-B MS), (440-107072-R-1-C MSD) and (440-107072-R-1-A SD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

**Client Sample ID: Berry & Ewing (Pond #4)**

**Lab Sample ID: 440-107071-1**

**Date Collected: 04/14/15 14:30**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		20		ug/L			04/18/15 19:57	10
Ethylbenzene	ND		20		ug/L			04/18/15 19:57	10
m,p-Xylene	ND		20		ug/L			04/18/15 19:57	10
o-Xylene	ND		20		ug/L			04/18/15 19:57	10
<b>Toluene</b>	<b>20</b>		20		ug/L			04/18/15 19:57	10
Xylenes, Total	ND		20		ug/L			04/18/15 19:57	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	108		80 - 128		04/18/15 19:57	10
<i>4-Bromofluorobenzene (Surr)</i>	102		80 - 120		04/18/15 19:57	10
<i>Dibromofluoromethane (Surr)</i>	90		76 - 132		04/18/15 19:57	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Acenaphthylene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Anthracene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Benzo[a]anthracene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Benzo[a]pyrene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Benzo[b]fluoranthene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Benzo[g,h,i]perylene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Benzo[k]fluoranthene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Chrysene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Dibenz(a,h)anthracene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Fluoranthene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
<b>Fluorene</b>	<b>19</b>		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Indeno[1,2,3-cd]pyrene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
<b>Naphthalene</b>	<b>25</b>		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
<b>Phenanthrene</b>	<b>39</b>		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10
Pyrene	ND		9.6		ug/L		04/16/15 17:25	04/20/15 16:00	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2-Fluorobiphenyl (Surr)</i>	111		31 - 120	04/16/15 17:25	04/20/15 16:00	10
<i>Nitrobenzene-d5</i>	2154	X	25 - 133	04/16/15 17:25	04/20/15 16:00	10
<i>Terphenyl-d14</i>	64		10 - 120	04/16/15 17:25	04/20/15 16:00	10

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>GRO (C4-C12)</b>	<b>14000</b>		500		ug/L			04/16/15 03:20	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>4-Bromofluorobenzene (Surr)</i>	101		65 - 140		04/16/15 03:20	10

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C13-C22</b>	<b>40</b>		11		mg/L		04/16/15 06:37	04/16/15 14:27	20
<b>C23-C40</b>	<b>37</b>		11		mg/L		04/16/15 06:37	04/16/15 14:27	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n-Octacosane</i>	58		45 - 120	04/16/15 06:37	04/16/15 14:27	20

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

**Client Sample ID: Berry & Ewing (Pond #4)**

**Lab Sample ID: 440-107071-1**

**Date Collected: 04/14/15 14:30**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>50</b>		50		mg/L			04/15/15 16:54	100
Nitrate as NO3	ND		50		mg/L			04/15/15 16:54	100
<b>Chloride</b>	<b>4200</b>		1000		mg/L			04/15/15 17:25	2000
<b>Sulfate</b>	<b>230</b>		50		mg/L			04/15/15 16:54	100

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:43	1
Arsenic	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:43	1
<b>Barium</b>	<b>0.49</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:00	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Boron</b>	<b>97</b>		0.50		mg/L		04/16/15 13:12	04/17/15 10:20	10
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Calcium</b>	<b>23</b>		0.10		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Chromium</b>	<b>0.013</b>		0.0050		mg/L		04/16/15 13:12	04/17/15 08:00	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Copper</b>	<b>0.020</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Iron</b>	<b>16</b>		0.040		mg/L		04/16/15 13:12	04/17/15 08:00	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 12:43	1
<b>Lithium</b>	<b>0.68</b>		0.050		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Magnesium</b>	<b>10</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Manganese</b>	<b>0.27</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Molybdenum</b>	<b>0.039</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Nickel</b>	<b>0.053</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Potassium</b>	<b>110</b>		0.50		mg/L		04/16/15 13:12	04/17/15 08:00	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:43	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Sodium</b>	<b>3300</b>		5.0		mg/L		04/16/15 13:12	04/17/15 10:20	10
<b>Strontium</b>	<b>1.1</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:00	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 12:43	1
<b>Vanadium</b>	<b>0.019</b>		0.010		mg/L		04/16/15 13:12	04/17/15 08:00	1
<b>Zinc</b>	<b>0.048</b>		0.020		mg/L		04/16/15 13:12	04/17/15 08:00	1

### Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Uranium</b>	<b>3.4</b>	<b>J</b>	10	2.3	ug/L		05/05/15 15:19	05/12/15 03:37	10
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Uranium</b>	<b>2.3</b>	<b>J</b>	6.7	1.5	pCi/L		05/05/15 15:19	05/12/15 03:37	10

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0010		mg/L		04/15/15 23:05	04/17/15 00:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>10000</b>		100		mg/L			04/17/15 08:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>1300</b>		4.0		mg/L			04/16/15 09:53	1
<b>Bicarbonate ion as HCO3</b>	<b>590</b>		4.8		mg/L			04/16/15 09:53	1
<b>Carbonate as CO3</b>	<b>490</b>		2.4		mg/L			04/16/15 09:53	1

TestAmerica Irvine

# Client Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

**Client Sample ID: Berry & Ewing (Pond #4)**

**Lab Sample ID: 440-107071-1**

**Date Collected: 04/14/15 14:30**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Hydroxide as OH	ND		1.4	mg/L			04/16/15 09:53	1

## Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	76.7	U G	86.7	87.1	141	pCi/L	05/06/15 13:40	05/11/15 07:30	1
<b>Gross Beta</b>	<b>80.8</b>	<b>G</b>	29.4	30.5	39.6	pCi/L	05/06/15 13:40	05/11/15 07:30	1

## Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.845</b>		0.427	0.434	0.533	pCi/L	04/17/15 13:41	05/11/15 07:32	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	40.4		40 - 110				04/17/15 13:41	05/11/15 07:32	1

## Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-1.02	U G	1.77	1.77	3.32	pCi/L	04/17/15 13:54	05/04/15 10:29	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	40.4		40 - 110				04/17/15 13:54	05/04/15 10:29	1
Y Carrier	92.0		40 - 110				04/17/15 13:54	05/04/15 10:29	1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>-0.17656</b>		1.82	1.822	3.32	pCi/L		05/13/15 19:28	1

# Method Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
6020A	Metals (ICP/MS)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
9310	Gross Alpha / Beta (GFPC)	SW846	TAL SL
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.  
SM = "Standard Methods For The Examination Of Water And Wastewater",  
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.  
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

#### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022  
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Lab Chronicle

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

**Client Sample ID: Berry & Ewing (Pond #4)**

**Lab Sample ID: 440-107071-1**

**Date Collected: 04/14/15 14:30**

**Matrix: Water**

**Date Received: 04/14/15 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	249744	04/18/15 19:57	TN	TAL IRV
Total/NA	Prep	3520C			1045 mL	5 mL	249425	04/16/15 17:25	AK	TAL IRV
Total/NA	Analysis	8270C SIM		10	1045 mL	5 mL	249919	04/20/15 16:00	AI	TAL IRV
Total/NA	Analysis	8015B		10	10 mL	10 mL	249061	04/16/15 03:20	AT	TAL IRV
Total/NA	Prep	3510C			925 mL	1 mL	249238	04/16/15 06:37	AP	TAL IRV
Total/NA	Analysis	8015B		20	925 mL	1 mL	249240	04/16/15 14:27	CN	TAL IRV
Total/NA	Analysis	300.0		100	5 mL		249001	04/15/15 16:54	NN	TAL IRV
Total/NA	Analysis	300.0		100	5 mL		249002	04/15/15 16:54	NN	TAL IRV
Total/NA	Analysis	300.0		2000	5 mL		249002	04/15/15 17:25	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249549	04/17/15 08:00	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		10	25 mL	25 mL	249583	04/17/15 10:20	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249356	04/16/15 13:12	EN	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249626	04/17/15 12:43	VS	TAL IRV
Total/NA	Prep	3010A			25 mL	50 mL	189452	05/05/15 15:19	DAS	TAL SL
Total/NA	Analysis	6020A		10	25 mL	50 mL	190430	05/12/15 03:37	CCB	TAL SL
Total/NA	Prep	7470A			4 mL	20 mL	249202	04/15/15 23:05	DB	TAL IRV
Total/NA	Analysis	7470A		1	4 mL	20 mL	249571	04/17/15 00:17	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			249489	04/16/15 09:53	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	249554	04/17/15 08:58	XL	TAL IRV
Total/NA	Prep	Evaporation			5 mL	1.0 g	189677	05/06/15 13:40	SCB	TAL SL
Total/NA	Analysis	9310		1	5 mL		190263	05/11/15 07:30	MLK	TAL SL
Total/NA	Prep	PrecSep-21			252.16 mL	1.0 g	186427	04/17/15 13:41	LEM	TAL SL
Total/NA	Analysis	9315		1	252.16 mL		190225	05/11/15 07:32	MLK	TAL SL
Total/NA	Prep	PrecSep_0			252.16 mL	1.0 g	186429	04/17/15 13:54	LEM	TAL SL
Total/NA	Analysis	9320		1	252.16 mL		189176	05/04/15 10:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			190710	05/13/15 19:28	RTM	TAL SL

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-249744/3**

**Matrix: Water**

**Analysis Batch: 249744**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			04/18/15 11:01	1
Ethylbenzene	ND		2.0		ug/L			04/18/15 11:01	1
m,p-Xylene	ND		2.0		ug/L			04/18/15 11:01	1
o-Xylene	ND		2.0		ug/L			04/18/15 11:01	1
Toluene	ND		2.0		ug/L			04/18/15 11:01	1
Xylenes, Total	ND		2.0		ug/L			04/18/15 11:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		04/18/15 11:01	1
4-Bromofluorobenzene (Surr)	98		80 - 120		04/18/15 11:01	1
Dibromofluoromethane (Surr)	108		76 - 132		04/18/15 11:01	1

**Lab Sample ID: LCS 440-249744/4**

**Matrix: Water**

**Analysis Batch: 249744**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.3		ug/L		93	68 - 130
Ethylbenzene	25.0	24.1		ug/L		96	70 - 130
m,p-Xylene	25.0	24.7		ug/L		99	70 - 130
o-Xylene	25.0	26.0		ug/L		104	70 - 130
Toluene	25.0	24.3		ug/L		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	108		76 - 132

**Lab Sample ID: 440-106770-A-1 MS**

**Matrix: Water**

**Analysis Batch: 249744**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	23.2		ug/L		90	66 - 130
Ethylbenzene	ND		25.0	23.5		ug/L		94	70 - 130
m,p-Xylene	ND		25.0	25.2		ug/L		101	70 - 133
o-Xylene	ND		25.0	25.5		ug/L		102	70 - 133
Toluene	ND		25.0	23.3		ug/L		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 128
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-106770-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 249744**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	25.0		ug/L		97	66 - 130	7	20
Ethylbenzene	ND		25.0	24.9		ug/L		100	70 - 130	6	20
m,p-Xylene	ND		25.0	26.7		ug/L		107	70 - 133	6	25
o-Xylene	ND		25.0	27.3		ug/L		109	70 - 133	7	20
Toluene	ND		25.0	25.1		ug/L		101	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 440-249425/1-A**

**Matrix: Water**

**Analysis Batch: 249919**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 249425**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Acenaphthylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[a]anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[a]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[b]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Benzo[k]fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Chrysene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Fluoranthene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Fluorene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Naphthalene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Phenanthrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1
Pyrene	ND		0.20		ug/L		04/16/15 17:25	04/20/15 12:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		31 - 120	04/16/15 17:25	04/20/15 12:14	1
Nitrobenzene-d5	75		25 - 133	04/16/15 17:25	04/20/15 12:14	1
Terphenyl-d14	81		10 - 120	04/16/15 17:25	04/20/15 12:14	1

**Lab Sample ID: LCS 440-249425/2-A**

**Matrix: Water**

**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 249425**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.00	0.740		ug/L		74	47 - 103
Acenaphthylene	1.00	0.735		ug/L		73	45 - 102

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 440-249425/2-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Anthracene	1.00	0.731		ug/L		73	47 - 111
Benzo[a]anthracene	1.00	0.801		ug/L		80	56 - 110
Benzo[a]pyrene	1.00	0.741		ug/L		74	48 - 110
Benzo[b]fluoranthene	1.00	0.879		ug/L		88	53 - 116
Benzo[g,h,i]perylene	1.00	1.01		ug/L		101	44 - 130
Benzo[k]fluoranthene	1.00	0.868		ug/L		87	51 - 127
Chrysene	1.00	0.842		ug/L		84	52 - 118
Dibenz(a,h)anthracene	1.00	0.928		ug/L		93	44 - 125
Fluoranthene	1.00	0.860		ug/L		86	51 - 116
Fluorene	1.00	0.786		ug/L		79	50 - 106
Indeno[1,2,3-cd]pyrene	1.00	0.966		ug/L		97	41 - 127
Naphthalene	1.00	0.721		ug/L		72	40 - 100
Phenanthrene	1.00	0.812		ug/L		81	49 - 110
Pyrene	1.00	0.839		ug/L		84	41 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	76		31 - 120
Nitrobenzene-d5	79		25 - 133
Terphenyl-d14	78		10 - 120

**Lab Sample ID: LCSD 440-249425/3-A**  
**Matrix: Water**  
**Analysis Batch: 249919**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249425**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthene	1.00	0.828		ug/L		83	47 - 103	11	35
Acenaphthylene	1.00	0.824		ug/L		82	45 - 102	11	35
Anthracene	1.00	0.842		ug/L		84	47 - 111	14	35
Benzo[a]anthracene	1.00	0.885		ug/L		88	56 - 110	10	35
Benzo[a]pyrene	1.00	0.826		ug/L		83	48 - 110	11	35
Benzo[b]fluoranthene	1.00	0.947		ug/L		95	53 - 116	7	35
Benzo[g,h,i]perylene	1.00	1.08		ug/L		108	44 - 130	6	35
Benzo[k]fluoranthene	1.00	0.928		ug/L		93	51 - 127	7	35
Chrysene	1.00	0.912		ug/L		91	52 - 118	8	35
Dibenz(a,h)anthracene	1.00	0.985		ug/L		98	44 - 125	6	35
Fluoranthene	1.00	0.932		ug/L		93	51 - 116	8	35
Fluorene	1.00	0.859		ug/L		86	50 - 106	9	35
Indeno[1,2,3-cd]pyrene	1.00	0.997		ug/L		100	41 - 127	3	35
Naphthalene	1.00	0.776		ug/L		78	40 - 100	7	35
Phenanthrene	1.00	0.893		ug/L		89	49 - 110	10	35
Pyrene	1.00	0.904		ug/L		90	41 - 115	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		31 - 120
Nitrobenzene-d5	80		25 - 133
Terphenyl-d14	81		10 - 120

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 8015B - Gasoline Range Organics - (GC)

**Lab Sample ID: MB 440-249061/4**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			04/15/15 17:05	1
Surrogate	%Recovery	MB Qualifier	Limits			D	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		65 - 140					04/15/15 17:05	1

**Lab Sample ID: LCS 440-249061/33**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	799		ug/L		100	80 - 120
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	94		65 - 140				

**Lab Sample ID: 440-106896-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	650		800	1330		ug/L		86	65 - 140
Surrogate	%Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	106		65 - 140						

**Lab Sample ID: 440-106896-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 249061**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	650		800	1370		ug/L		90	65 - 140	3	20
Surrogate	%Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	104		65 - 140								

## Method: 8015B - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 440-249238/1-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		0.50		mg/L		04/16/15 06:37	04/16/15 11:08	1
C23-C40	ND		0.50		mg/L		04/16/15 06:37	04/16/15 11:08	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: MB 440-249238/1-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Surrogate	<i>MB</i> %Recovery	<i>MB</i> Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane	69		45 - 120	04/16/15 06:37	04/16/15 11:08	1

**Lab Sample ID: LCS 440-249238/2-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	1.00	0.660		mg/L		66	40 - 115

Surrogate	<i>LCS</i> %Recovery	<i>LCS</i> Qualifier	Limits
<i>n</i> -Octacosane	68		45 - 120

**Lab Sample ID: LCSD 440-249238/3-A**  
**Matrix: Water**  
**Analysis Batch: 249239**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 249238**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	1.00	0.643		mg/L		64	40 - 115	3	25

Surrogate	<i>LCSD</i> %Recovery	<i>LCSD</i> Qualifier	Limits
<i>n</i> -Octacosane	68		45 - 120

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-249001/4**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	<i>MB</i> Result	<i>MB</i> Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as NO3	ND		0.50		mg/L			04/15/15 12:12	1

**Lab Sample ID: LCS 440-249001/2**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	5.00	5.03		mg/L		101	90 - 110

**Lab Sample ID: LCSD 440-249001/6**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	5.00	5.08		mg/L		102	90 - 110	1	20

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-107064-AC-2 MS**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	ND		50.0	55.4		mg/L		111	80 - 120

**Lab Sample ID: 440-107064-AC-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 249001**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	ND		50.0	55.1		mg/L		110	80 - 120	1	20

**Lab Sample ID: MB 440-249002/4**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			04/15/15 12:12	1
Chloride	ND		0.50		mg/L			04/15/15 12:12	1
Sulfate	ND		0.50		mg/L			04/15/15 12:12	1

**Lab Sample ID: LCS 440-249002/2**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.06		mg/L		101	90 - 110
Chloride	5.00	4.90		mg/L		98	90 - 110
Fluoride	5.00	4.51		mg/L		90	90 - 110
Sulfate	5.00	4.73		mg/L		95	90 - 110

**Lab Sample ID: LCSD 440-249002/6**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	5.00	5.10		mg/L		102	90 - 110	1	20
Chloride	5.00	5.03		mg/L		100	90 - 110	2	20
Fluoride	5.00	4.64		mg/L		93	90 - 110	3	20
Sulfate	5.00	5.00		mg/L		100	90 - 110	6	20

**Lab Sample ID: 440-107064-AC-2 MS**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		50.0	57.7		mg/L		115	80 - 120
Chloride	120		50.0	161		mg/L		88	80 - 120
Fluoride	ND		50.0	53.4		mg/L		107	80 - 120
Sulfate	670		50.0	673	4	mg/L		7	80 - 120

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-107064-AC-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 249002**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		50.0	56.6		mg/L		113	80 - 120	2	20
Chloride	120		50.0	157		mg/L		81	80 - 120	2	20
Fluoride	ND		50.0	53.3		mg/L		107	80 - 120	0	20
Sulfate	670		50.0	651	4	mg/L		-37	80 - 120	3	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Beryllium	ND		0.0020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Boron	ND		0.050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Cadmium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Calcium	ND		0.10		mg/L		04/16/15 13:12	04/17/15 07:04	1
Chromium	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Cobalt	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Copper	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Iron	ND		0.040		mg/L		04/16/15 13:12	04/17/15 07:04	1
Lithium	ND		0.050		mg/L		04/16/15 13:12	04/17/15 07:04	1
Magnesium	0.0308		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Manganese	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Molybdenum	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Nickel	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Potassium	ND		0.50		mg/L		04/16/15 13:12	04/17/15 07:04	1
Silver	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Sodium	ND		0.50		mg/L		04/16/15 13:12	04/17/15 07:04	1
Strontium	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1
Vanadium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 07:04	1
Zinc	ND		0.020		mg/L		04/16/15 13:12	04/17/15 07:04	1

**Lab Sample ID: MB 440-249356/1-A**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Arsenic	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Lead	ND		0.0050		mg/L		04/16/15 13:12	04/17/15 10:46	1
Selenium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1
Thallium	ND		0.010		mg/L		04/16/15 13:12	04/17/15 10:46	1

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 440-249356/2-A**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	1.00	0.996		mg/L		100	80 - 120
Beryllium	1.00	1.01		mg/L		101	80 - 120
Boron	1.00	0.986		mg/L		99	80 - 120
Cadmium	1.00	0.996		mg/L		100	80 - 120
Calcium	5.00	5.12		mg/L		102	80 - 120
Chromium	1.00	0.985		mg/L		99	80 - 120
Cobalt	1.00	0.999		mg/L		100	80 - 120
Copper	1.00	0.987		mg/L		99	80 - 120
Iron	1.00	1.06		mg/L		106	80 - 120
Lithium	1.00	0.974		mg/L		97	80 - 120
Magnesium	5.00	5.00		mg/L		100	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Molybdenum	1.00	0.987		mg/L		99	80 - 120
Nickel	1.00	1.00		mg/L		100	80 - 120
Potassium	10.0	9.95		mg/L		100	80 - 120
Silver	0.500	0.478		mg/L		96	80 - 120
Sodium	10.0	9.79		mg/L		98	80 - 120
Strontium	1.00	0.994		mg/L		99	80 - 120
Vanadium	1.00	0.975		mg/L		98	80 - 120
Zinc	1.00	0.954		mg/L		95	80 - 120

**Lab Sample ID: LCS 440-249356/2-A**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	0.985		mg/L		98	80 - 120
Arsenic	1.00	0.967		mg/L		97	80 - 120
Lead	1.00	0.960		mg/L		96	80 - 120
Selenium	1.00	0.909		mg/L		91	80 - 120
Thallium	1.00	0.920		mg/L		92	80 - 120

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	0.18		1.00	1.15		mg/L		97	75 - 125
Beryllium	ND		1.00	1.01		mg/L		101	75 - 125
Boron	0.14		1.00	1.16		mg/L		102	75 - 125
Cadmium	ND		1.00	0.964		mg/L		96	75 - 125
Calcium	120		5.00	125	4	mg/L		41	75 - 125
Chromium	0.0066		1.00	0.986		mg/L		98	75 - 125
Cobalt	ND		1.00	0.944		mg/L		94	75 - 125
Copper	ND		1.00	1.01		mg/L		101	75 - 125
Iron	2.7	F1	1.00	3.33	F1	mg/L		64	75 - 125
Lithium	ND		1.00	0.858		mg/L		86	75 - 125
Magnesium	49		5.00	52.9	4	mg/L		70	75 - 125

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	0.034		1.00	0.987		mg/L		95	75 - 125
Molybdenum	ND		1.00	0.983		mg/L		98	75 - 125
Nickel	ND		1.00	0.956		mg/L		96	75 - 125
Potassium	2.6		10.0	12.5		mg/L		99	75 - 125
Silver	ND		0.500	0.492		mg/L		98	75 - 125
Sodium	130		10.0	141	4	mg/L		68	75 - 125
Strontium	0.81		1.00	1.79		mg/L		98	75 - 125
Vanadium	0.031		1.00	1.02		mg/L		99	75 - 125
Zinc	ND		1.00	0.955		mg/L		94	75 - 125

**Lab Sample ID: 440-106885-I-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		1.00	0.978		mg/L		98	75 - 125
Arsenic	ND		1.00	0.973		mg/L		97	75 - 125
Lead	ND		1.00	0.890		mg/L		89	75 - 125
Selenium	ND		1.00	0.883		mg/L		88	75 - 125
Thallium	ND		1.00	0.841		mg/L		84	75 - 125

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249549**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Barium	0.18		1.00	1.11		mg/L		94	75 - 125	3	20
Beryllium	ND		1.00	0.992		mg/L		99	75 - 125	2	20
Boron	0.14		1.00	1.11		mg/L		98	75 - 125	4	20
Cadmium	ND		1.00	0.928		mg/L		93	75 - 125	4	20
Calcium	120		5.00	124	4	mg/L		13	75 - 125	1	20
Chromium	0.0066		1.00	0.942		mg/L		94	75 - 125	4	20
Cobalt	ND		1.00	0.917		mg/L		92	75 - 125	3	20
Copper	ND		1.00	0.979		mg/L		98	75 - 125	3	20
Iron	2.7	F1	1.00	3.36	F1	mg/L		67	75 - 125	1	20
Lithium	ND		1.00	0.845		mg/L		85	75 - 125	1	20
Magnesium	49		5.00	52.7	4	mg/L		64	75 - 125	1	20
Manganese	0.034		1.00	0.973		mg/L		94	75 - 125	1	20
Molybdenum	ND		1.00	0.960		mg/L		96	75 - 125	2	20
Nickel	ND		1.00	0.918		mg/L		92	75 - 125	4	20
Potassium	2.6		10.0	12.3		mg/L		97	75 - 125	2	20
Silver	ND		0.500	0.475		mg/L		95	75 - 125	3	20
Sodium	130		10.0	139	4	mg/L		50	75 - 125	1	20
Strontium	0.81		1.00	1.76		mg/L		95	75 - 125	2	20
Vanadium	0.031		1.00	0.988		mg/L		96	75 - 125	3	20
Zinc	ND		1.00	0.917		mg/L		91	75 - 125	4	20

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-106885-I-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 249594**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 249356**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	ND		1.00	1.00		mg/L		100	75 - 125	2	20
Arsenic	ND		1.00	1.01		mg/L		101	75 - 125	3	20
Lead	ND		1.00	0.915		mg/L		92	75 - 125	3	20
Selenium	ND		1.00	0.916		mg/L		92	75 - 125	4	20
Thallium	ND		1.00	0.867		mg/L		87	75 - 125	3	20

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 160-189452/1-A**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<1.0		1.0	0.23	ug/L		05/05/15 15:19	05/12/15 02:20	2

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.67		0.67	0.15	pCi/L		05/05/15 15:19	05/12/15 02:20	2

**Lab Sample ID: LCS 160-189452/2-A**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Uranium	1000	1170		ug/L		117	80 - 120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Uranium	670	784		pCi/L		117	80 - 120

**Lab Sample ID: 440-107072-R-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	2.0	J	1000	1000		ug/L		100	75 - 125

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	1.4	J	670	673		pCi/L		100	75 - 125

**Lab Sample ID: 440-107072-R-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 190430**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 189452**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Uranium	2.0	J	1000	1020		ug/L		101	75 - 125	1	20

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Uranium	1.4	J	670	681		pCi/L		101	75 - 125	1	20

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 440-249202/1-A**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/15/15 23:05	04/16/15 23:45	1

**Lab Sample ID: LCS 440-249202/2-A**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00800	0.00851		mg/L		106	80 - 120

**Lab Sample ID: 440-107024-H-6-B MS**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.00800	0.00948		mg/L		118	70 - 130

**Lab Sample ID: 440-107024-H-6-C MSD**  
**Matrix: Water**  
**Analysis Batch: 249571**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 249202**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00800	0.00936		mg/L		117	70 - 130	1	20

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-249489/3**  
**Matrix: Water**  
**Analysis Batch: 249489**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			04/16/15 06:35	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			04/16/15 06:35	1
Carbonate as CO3	ND		2.4		mg/L			04/16/15 06:35	1
Hydroxide as OH	ND		1.4		mg/L			04/16/15 06:35	1

**Lab Sample ID: LCS 440-249489/2**  
**Matrix: Water**  
**Analysis Batch: 249489**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Alkalinity as CaCO3	85.4	86.4		mg/L		101	80 - 120

**Lab Sample ID: 440-107093-B-1 DU**  
**Matrix: Water**  
**Analysis Batch: 249489**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Alkalinity as CaCO3	380		381		mg/L		0.06	20
Bicarbonate ion as HCO3	460		465		mg/L		0.06	20

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 440-107093-B-1 DU  
 Matrix: Water  
 Analysis Batch: 249489

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Carbonate as CO3	ND		ND		mg/L		NC	20
Hydroxide as OH	ND		ND		mg/L		NC	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-249554/1  
 Matrix: Water  
 Analysis Batch: 249554

Client Sample ID: Method Blank  
 Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	ND		10		mg/L			04/17/15 08:58	1

Lab Sample ID: LCS 440-249554/2  
 Matrix: Water  
 Analysis Batch: 249554

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Lab Sample ID: 440-106858-A-1 DU  
 Matrix: Water  
 Analysis Batch: 249554

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	1300		1300		mg/L		0.2	5

## Method: 9310 - Gross Alpha / Beta (GFPC)

Lab Sample ID: MB 160-189677/1-A  
 Matrix: Water  
 Analysis Batch: 190171

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 189677

Analyte	MB	MB	Count	Total	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)					
Gross Alpha	0.3968	U	0.505	0.507	0.836	pCi/L	05/06/15 13:40	05/10/15 19:23	1
Gross Beta	0.8809		0.517	0.524	0.762	pCi/L	05/06/15 13:40	05/10/15 19:23	1

Lab Sample ID: LCS 160-189677/2-A  
 Matrix: Water  
 Analysis Batch: 190172

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 189677

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 9310 - Gross Alpha / Beta (GFPC) (Continued)

**Lab Sample ID: LCSB 160-189677/3-A**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	95.1	94.63		10.0	1.05	pCi/L	100	75 - 125

**Lab Sample ID: 160-11454-A-1-F MS**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	5.32	G	82.0	94.11		14.1	3.44	pCi/L	108	35 - 150

**Lab Sample ID: 160-11454-A-1-G MSBT**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	3.67		156	154.8		16.4	1.80	pCi/L	97	89 - 143

**Lab Sample ID: 160-11454-A-1-H DU**  
**Matrix: Water**  
**Analysis Batch: 190172**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	MDC	Unit	RER	RER Limit
Gross Alpha	5.32	G	3.871	U G	2.83	4.13	pCi/L	0.25	1
Gross Beta	3.67		3.249		1.25	1.61	pCi/L	0.16	1

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-186427/1-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05445	U	0.0501	0.0504	0.0789	pCi/L	04/17/15 13:41	05/11/15 07:32	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	107		40 - 110				04/17/15 13:41	05/11/15 07:32	1

**Lab Sample ID: LCS 160-186427/2-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	10.51		1.03	0.0726	pCi/L	94	68 - 137

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 9315 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-186427/2-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	110		40 - 110

**Lab Sample ID: LCSD 160-186427/3-A**  
**Matrix: Water**  
**Analysis Batch: 190225**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 186427**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	10.66		1.04	0.0871	pCi/L	95	68 - 137	0.07	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	107		40 - 110

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-186429/1-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.05587	U	0.179	0.179	0.328	pCi/L	04/17/15 13:54	05/04/15 10:28	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110	04/17/15 13:54	05/04/15 10:28	1
Y Carrier	92.0		40 - 110	04/17/15 13:54	05/04/15 10:28	1

**Lab Sample ID: LCS 160-186429/2-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-228	3.43	3.034		0.445	0.270	pCi/L	88	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	110		40 - 110
Y Carrier	90.8		40 - 110

**Lab Sample ID: LCSD 160-186429/3-A**  
**Matrix: Water**  
**Analysis Batch: 189176**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 186429**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	3.43	3.100		0.477	0.356	pCi/L	90	56 - 140	0.07	1

TestAmerica Irvine

# QC Sample Results

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-186429/3-A  
Matrix: Water  
Analysis Batch: 189176

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 186429

<i>Carrier</i>	<i>LCSD %Yield</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	107		40 - 110
<i>Y Carrier</i>	87.5		40 - 110

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# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## GC/MS VOA

### Analysis Batch: 249744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106770-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-106770-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	8260B	
LCS 440-249744/4	Lab Control Sample	Total/NA	Water	8260B	
MB 440-249744/3	Method Blank	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 249425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	3520C	
LCS 440-249425/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-249425/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-249425/1-A	Method Blank	Total/NA	Water	3520C	

### Analysis Batch: 249919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	8270C SIM	249425
LCS 440-249425/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	249425
LCSD 440-249425/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	249425
MB 440-249425/1-A	Method Blank	Total/NA	Water	8270C SIM	249425

## GC VOA

### Analysis Batch: 249061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106896-A-1 MS	Matrix Spike	Total/NA	Water	8015B	
440-106896-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	8015B	
LCS 440-249061/33	Lab Control Sample	Total/NA	Water	8015B	
MB 440-249061/4	Method Blank	Total/NA	Water	8015B	

## GC Semi VOA

### Prep Batch: 249238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	3510C	
LCS 440-249238/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-249238/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-249238/1-A	Method Blank	Total/NA	Water	3510C	

### Analysis Batch: 249239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-249238/2-A	Lab Control Sample	Total/NA	Water	8015B	249238
LCSD 440-249238/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	249238
MB 440-249238/1-A	Method Blank	Total/NA	Water	8015B	249238

### Analysis Batch: 249240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	8015B	249238

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## HPLC/IC

### Analysis Batch: 249001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107064-AC-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-107064-AC-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	300.0	
LCS 440-249001/2	Lab Control Sample	Total/NA	Water	300.0	
LCS 440-249001/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-249001/4	Method Blank	Total/NA	Water	300.0	

### Analysis Batch: 249002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107064-AC-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-107064-AC-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	300.0	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	300.0	
LCS 440-249002/2	Lab Control Sample	Total/NA	Water	300.0	
LCS 440-249002/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-249002/4	Method Blank	Total/NA	Water	300.0	

## Metals

### Prep Batch: 189452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	3010A	
440-107072-R-1-B MS	Matrix Spike	Total/NA	Water	3010A	
440-107072-R-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
LCS 160-189452/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-189452/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 190430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	6020A	189452
440-107072-R-1-B MS	Matrix Spike	Total/NA	Water	6020A	189452
440-107072-R-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6020A	189452
LCS 160-189452/2-A	Lab Control Sample	Total/NA	Water	6020A	189452
MB 160-189452/1-A	Method Blank	Total/NA	Water	6020A	189452

### Prep Batch: 249202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107024-H-6-B MS	Matrix Spike	Total/NA	Water	7470A	
440-107024-H-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	7470A	
LCS 440-249202/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-249202/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 249356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	3005A	
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
440-107071-1	Berry & Ewing (Pond #4)	Total Recoverable	Water	3005A	
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Metals (Continued)

### Analysis Batch: 249549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	6010B	249356
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249356
440-107071-1	Berry & Ewing (Pond #4)	Total Recoverable	Water	6010B	249356
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249356
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107024-H-6-B MS	Matrix Spike	Total/NA	Water	7470A	249202
440-107024-H-6-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	249202
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	7470A	249202
LCS 440-249202/2-A	Lab Control Sample	Total/NA	Water	7470A	249202
MB 440-249202/1-A	Method Blank	Total/NA	Water	7470A	249202

### Analysis Batch: 249583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106885-I-1-C MS	Matrix Spike	Total Recoverable	Water	6010B	249356
440-106885-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249356
LCS 440-249356/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249356
MB 440-249356/1-A	Method Blank	Total Recoverable	Water	6010B	249356

### Analysis Batch: 249626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total Recoverable	Water	6010B	249356

## General Chemistry

### Analysis Batch: 249489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	SM 2320B	
440-107093-B-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-249489/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-249489/3	Method Blank	Total/NA	Water	SM 2320B	

### Analysis Batch: 249554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106858-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	SM 2540C	
LCS 440-249554/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-249554/1	Method Blank	Total/NA	Water	SM 2540C	

## Rad

### Prep Batch: 186427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	PrecSep-21	

TestAmerica Irvine

# QC Association Summary

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Rad (Continued)

### Prep Batch: 186427 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-186427/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-186427/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-186427/1-A	Method Blank	Total/NA	Water	PrecSep-21	

### Prep Batch: 186429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	PrecSep_0	
LCS 160-186429/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-186429/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-186429/1-A	Method Blank	Total/NA	Water	PrecSep_0	

### Prep Batch: 189677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11454-A-1-F MS	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-G MSBT	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-H DU	Duplicate	Total/NA	Water	Evaporation	
440-107071-1	Berry & Ewing (Pond #4)	Total/NA	Water	Evaporation	
LCS 160-189677/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-189677/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
MB 160-189677/1-A	Method Blank	Total/NA	Water	Evaporation	

# Definitions/Glossary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Certification Summary

Client: Envirotech Consultants, Inc.  
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
 SDG: LINN, Midway Sunset Berry & Ewing

## Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

## Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-15
California	NELAP	9	2886	03-31-16
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-15
Illinois	NELAP	5	200023	11-30-15
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	04-30-15 *
Kentucky (DW)	State Program	4	90125	12-31-15
L-A-B	DoD ELAP		L2305	01-10-16
Louisiana	NELAP	6	04080	06-30-15
Louisiana (DW)	NELAP	6	LA150017	12-31-16
Maryland	State Program	3	310	09-30-15
Missouri	State Program	7	780	06-30-15
Nevada	State Program	9	MO000542013-1	07-31-15
New Jersey	NELAP	2	MO002	06-30-15
New Mexico	State Program	6		06-30-10 *
New York	NELAP	2	11616	03-31-16
North Dakota	State Program	8	R207	06-30-15
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-15
Pennsylvania	NELAP	3	68-00540	02-28-16
South Carolina	State Program	4	85002001	06-30-15
Texas	NELAP	6	T104704193-13-6	07-31-15
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542013-5	07-31-15
Virginia	NELAP	3	460230	06-14-15
Washington	State Program	10	C592	08-30-15
West Virginia DEP	State Program	3	381	08-31-15

\* Certification renewal pending - certification considered valid.

TestAmerica Irvine  
17461 Derian Ave  
Suite 100  
Irvine, CA 92614  
phone 949.261.1022 fax

# Chain of Custody Record

TestAmerica  
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program:  DW  NPDES  RCRA  Other: RWQCB Orders

**Client Contact**  
EnviroTech Consultants, Inc.  
5400 Rosedale Highway  
Bakersfield, CA 93308  
(661) 377-0073 Phone  
(661) 377-0074 FAX  
Project Name: RWQCB Pond Testing, 2015  
Site: LINN, Midway Sunset Berry & Ewing  
P.O.#: BER116

**Project Manager:** Jane McNabob  
Tel/Fax: 661-377-0073 X 11

**Site Contact:** Josh Meyer  
**Lab Contact:** Janice Hsu

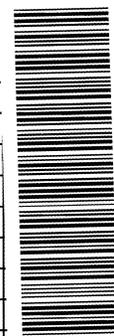
**Analysis Turnaround Time**  
 CALENDAR DAYS  WORKING DAYS  
TAT if different from Below  
 2 weeks  
 1 week  
 2 days  
 1 day

**Date:** \_\_\_\_\_ of \_\_\_\_\_ COCs  
**Carrier:** \_\_\_\_\_

**Sampler:** \_\_\_\_\_  
**For Lab Use Only:** \_\_\_\_\_  
**Walk-in Client:** \_\_\_\_\_  
**Lab Sampling:** \_\_\_\_\_

**Job / SDG No.:** \_\_\_\_\_

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	6010B CAM Metals	7470A Mercury (CVAA)	8260B BTEX	8015B C13-C22/C23-C40	PAH List 8270C SIM SVOC	300.0 Chloride, Bromide, Sulfate	300.0 Nitrate NO3	SM 2320B Alkalinity all forms ion	9310 Gross Alpha	9320 Rad 228	6020A Uranium	Ra226, RA228	Sample Specific Notes:
Berry & Ewing Pond #2	4/14/15	1430		Water		N		X	X	X	X	X	X	X	X	X	X	X	X	500 ml Nitric acid preserved bottle missing from suite, replaced by 1 Nitric acid preserved bottle



440-107071 Chain of Custody

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other

**Possible Hazard Identification:** Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazardous  Flammable  Skin Irritant  Poison B  Unknown

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

**Special Instructions/QC Requirements & Comments:** Please analyze the samples to meet the RWQCB requirements on the attached sheet.

5-8/15-1  
6-5/15-8  
6-3/15-6

**Custody Seal No.:** \_\_\_\_\_  
**Relinquished by:** Josh Meyer  
**Relinquished by:** [Signature]  
**Relinquished by:** [Signature]

**Company:** EnviroTech Cons  
**Company:** DCS  
**Company:** DCI

**Date/Time:** 4/14/15 1557  
**Date/Time:** 4/11/15 1845  
**Date/Time:** 4/14/15 1845

**Received by:** [Signature]  
**Received by:** [Signature]  
**Received in Laboratory by:** [Signature]

**Company:** DCS  
**Company:** DCS  
**Company:** TAI

**Therm ID No.:** 74  
**Cooler Temp. (°C):** 3.2  
**Obs'd:** 3.9  
**Corrd:** 3.2



## Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-107071-1  
SDG Number: LINN, Midway Sunset Berry & Ewing

**Login Number: 107071**

**List Number: 1**

**Creator: Hsu, Janice**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Tracer/Carrier Summary

Client: Envirotech Consultants, Inc.  
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-107071-1  
SDG: LINN, Midway Sunset Berry & Ewing

## Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)							
440-107071-1	Berry & Ewing (Pond #4)	40.4							
LCS 160-186427/2-A	Lab Control Sample	110							
LCSD 160-186427/3-A	Lab Control Sample Dup	107							
MB 160-186427/1-A	Method Blank	107							

### Tracer/Carrier Legend

Ba = Ba Carrier

## Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)						
440-107071-1	Berry & Ewing (Pond #4)	40.4	92.0						
LCS 160-186429/2-A	Lab Control Sample	110	90.8						
LCSD 160-186429/3-A	Lab Control Sample Dup	107	87.5						
MB 160-186429/1-A	Method Blank	107	92.0						

### Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

ATTACHMENT G

Laboratory Analytical Report, January 2015, LINN Identified Ponds, Hill Lease



Date of Report: 01/28/2015

Brian Smith

Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

Client Project: [none]  
BCL Project: SB4  
BCL Work Order: 1500555  
Invoice ID: B194388

Enclosed are the results of analyses for samples received by the laboratory on 1/7/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan  
Client Services

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Chain of Custody Form

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**\*Required Fields**

Report To: Linn Energy  
 Client: Linn Energy  
 Attn: Brian Smith  
 Street Address: 18271 Highway 33  
 City: McKittrick State: CA Zip: 93251  
 Phone: (661) 487-4594 Fax: ( )  
 Email Address: brsmith@linenergy.com  
 Submission #: 15-00555

Project Description: SB4  
 Project Code: SB4  
 Sampler(s): Juan Enriquez

Matrix: Water

Sample #	Date	Time	Matrix*
1	1/7/15	9:15	Water

Sample Description: Hill property Produced Water

1500555

Analysis Requested:

Metals-CR-Titile 22, Cr6	✓
Li, Sr, B, Na, K, Mg, Ca, Ur	✓
NO3, Cl, SO4, Br, F	✓
Alkalinity, CO3, HCO3, OH	✓
Radium 226 & 228, GA	✓
BTEX, Asbestos	✓
Methane, TDS, FDS, VDS	✓
PH, EC	✓
Polynuclear Aromatics	✓
Field-pH, EC Temp.	✓

Notes: Temp 68°F, PH 6.67, EC 26.4 uM @ 19°C

Matrix Types: S = Soil, SI = Sludge, DW = Drinking Water, WW = Wastewater, GW = Groundwater, L = Liquid, M = Miscellaneous, O = Other

Turnaround # of working days: 24 Hr Rush, 48 Hr Rush, 3-5 Day Rush, Normal (10 - Days)

Lab TAT Approval: Additional Charges May Apply

Cost Center: MBU Site, CVX RCRA, Geotracker 5 File (CA Default), Geotracker 2 File, Other (Specify)

Comments: FILTER ALL SAMPLES BEFORE ANALYZING AND SUBCONTRACTING.

Global ID: 17151525

1. Relinquished By: [Signature] Date: 1/7/15 Time: 15:25  
 2. Relinquished By: [Signature] Date: 1/7/15 Time: 15:20  
 3. Relinquished By: [Signature] Date: 1/7/15 Time: 15:20

BC Laboratories, Inc. 4100 Atlas Court - Bakersfield CA 93308 (661) 327-4911 Fax: (661) 327-1918 www.bclabs.com



BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 of 1

Submission #: 15-60555

**SHIPPING INFORMATION**  
 Federal Express  UPS  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None  Box   
 Other  (Specify) \_\_\_\_\_

**FREE LIQUID**  
 YES  NO

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

COC Received YES  NO  Emissivity: 0.98 Container: PE Thermometer ID: 208 Date/Time 7/15/15  
 Temperature: (A) 0.6 °C (C) 0.2 °C Analyst Init MWB/1526

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	F	S	K							
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504	A	>	E							
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER	L									
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: Am Date/Time: 7/15/15 11:40 (S:\WPDoc\WordPerfect\LAB\_DOCS\FORMS\ISAMREC)  
 A = Actual / C = Corrected



Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1500555-01	<b>COC Number:</b>	---	<b>Receive Date:</b>	01/07/2015 15:26
	<b>Project Number:</b>	---	<b>Sampling Date:</b>	01/07/2015 09:15
	<b>Sampling Location:</b>	---	<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	Hill Property Produced Water	<b>Lab Matrix:</b>	Water
	<b>Sampled By:</b>	Juan Enriquez	<b>Sample Type:</b>	Water

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Volatile Organic Analysis (EPA Method 8260B)

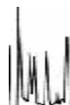
<b>BCL Sample ID:</b> 1500555-01	<b>Client Sample Name:</b> Hill Property Produced Water, 1/7/2015 9:15:00AM, Juan Enriquez
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z1	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	106	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/13/15	01/15/15 11:37	JMS	MS-V10	1	BYA0760

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

Reported: 01/28/2015 16:40  
Project: SB4  
Project Number: [none]  
Project Manager: Brian Smith

### Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

<b>BCL Sample ID:</b> 1500555-01	<b>Client Sample Name:</b> Hill Property Produced Water, 1/7/2015 9:15:00AM, Juan Enriquez
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	0.27	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Acenaphthylene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Anthracene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Benzo[a]anthracene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Benzo[b]fluoranthene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Benzo[k]fluoranthene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Benzo[a]pyrene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Benzo[g,h,i]perylene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Chrysene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Dibenzo[a,h]anthracene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Fluoranthene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Fluorene	0.97	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Naphthalene	13	ug/L	1.0	0.34	EPA-8270C-SIM	ND	A01	2
Phenanthrene	0.32	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Pyrene	ND	ug/L	0.10	0.034	EPA-8270C-SIM	ND		1
Nitrobenzene-d5 (Surrogate)	84.1	%	42 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	72.5	%	50 - 116 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	90.0	%	43 - 134 (LCL - UCL)		EPA-8270C-SIM			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C-SIM	01/09/15	01/12/15 12:08	MK1	MS-B4	1	BYA0793
2	EPA-8270C-SIM	01/09/15	01/14/15 22:36	MK1	MS-B4	10	BYA0793

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Gas Testing in Water

<b>BCL Sample ID:</b> 1500555-01	<b>Client Sample Name:</b> Hill Property Produced Water, 1/7/2015 9:15:00AM, Juan Enriquez
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Methane	1.3	mg/L	0.010	0.0035	RSK-175M	ND	A01	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	RSK-175M	01/09/15	01/09/15 09:27	JMS	GC-V1	10	BYA0559

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

Reported: 01/28/2015 16:40  
Project: SB4  
Project Number: [none]  
Project Manager: Brian Smith

### Water Analysis (General Chemistry)

BCL Sample ID: 1500555-01		Client Sample Name: Hill Property Produced Water, 1/7/2015 9:15:00AM, Juan Enriquez						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Electrical Conductivity @ 25 C (Field Test)	26000	umhos/cm	1.0	1.0	EPA-120.1			1
pH (Field Test)	6.67	pH Units	0.05	0.05	EPA-150.1			2
Temperature (Field Test)	68.0	F	32.0	32.0	SM-2550B			3
Dissolved Calcium	160	mg/L	0.50	0.080	EPA-6010B	0.24	A07	4
Dissolved Magnesium	130	mg/L	0.25	0.095	EPA-6010B	ND	A07	4
Dissolved Sodium	4500	mg/L	2.5	0.26	EPA-6010B	ND	A07	4
Dissolved Potassium	50	mg/L	5.0	0.50	EPA-6010B	ND	A07	4
Bicarbonate Alkalinity as CaCO3	1500	mg/L	8.2	8.2	EPA-310.1	ND		5
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	EPA-310.1	ND		5
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	EPA-310.1	ND		5
Total Alkalinity as CaCO3	1500	mg/L	8.2	8.2	EPA-310.1	ND		5
Bromide	74	mg/L	10	3.5	EPA-300.0	ND	A07	6
Chloride	8500	mg/L	50	6.1	EPA-300.0	ND	A07	6
Fluoride	2.2	mg/L	5.0	1.2	EPA-300.0	ND	J,A07	6
Nitrate as NO3	ND	mg/L	44	7.8	EPA-300.0	ND	A07	6
Sulfate	86	mg/L	100	10	EPA-300.0	ND	J,A07	6
Total Dissolved Solids @ 180 C	16000	mg/L	1000	1000	EPA-160.1	ND		7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-120.1	01/07/15	01/07/15 09:15	JCE	Inst	1	BYA1218
2	EPA-150.1	01/07/15	01/07/15 09:15	JCE	Inst	1	BYA1218
3	SM-2550B	01/07/15	01/07/15 09:15	JCE	Inst	1	BYA1218
4	EPA-6010B	01/13/15	01/14/15 12:35	ARD	PE-OP3	5	BYA0905
5	EPA-310.1	01/13/15	01/13/15 11:21	RML	MET-1	2	BYA0782
6	EPA-300.0	01/08/15	01/08/15 19:38	BMW	IC8	100	BYA0564
7	EPA-160.1	01/13/15	01/13/15 09:30	CAD	MANUAL	100	BYA0913

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Metals Analysis

<b>BCL Sample ID:</b> 1500555-01	<b>Client Sample Name:</b> Hill Property Produced Water, 1/7/2015 9:15:00AM, Juan Enriquez
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Dissolved Antimony	ND	ug/L	500	24	EPA-6010B	ND	A07	1
Dissolved Arsenic	ND	ug/L	250	46	EPA-6010B	ND	A07	1
<b>Hexavalent Chromium</b>	<b>3.2</b>	<b>ug/L</b>	<b>2.0</b>	<b>0.70</b>	<b>EPA-7196</b>	ND		2
<b>Dissolved Barium</b>	<b>2100</b>	<b>ug/L</b>	<b>50</b>	<b>18</b>	<b>EPA-6010B</b>	ND	<b>A07</b>	1
Dissolved Beryllium	ND	ug/L	50	2.5	EPA-6010B	ND	A07	1
<b>Dissolved Boron</b>	<b>49</b>	<b>mg/L</b>	<b>0.50</b>	<b>0.050</b>	<b>EPA-6010B</b>	0.17	<b>A07</b>	1
Dissolved Cadmium	ND	ug/L	50	5.5	EPA-6010B	ND	A07	1
Dissolved Chromium	ND	ug/L	50	5.0	EPA-6010B	ND	A07	1
Dissolved Cobalt	ND	ug/L	250	5.5	EPA-6010B	ND	A07	1
<b>Dissolved Copper</b>	<b>8.5</b>	<b>ug/L</b>	<b>50</b>	<b>5.0</b>	<b>EPA-6010B</b>	16	<b>J,A07</b>	1
Dissolved Lead	ND	ug/L	250	18	EPA-6010B	ND	A07	1
<b>Dissolved Lithium</b>	<b>1.9</b>	<b>mg/L</b>	<b>0.10</b>	<b>0.031</b>	<b>EPA-6010B</b>	ND	<b>A07</b>	1
Dissolved Mercury	ND	ug/L	0.20	0.033	EPA-7470A	ND		3
<b>Dissolved Molybdenum</b>	<b>21</b>	<b>ug/L</b>	<b>250</b>	<b>7.0</b>	<b>EPA-6010B</b>	ND	<b>J,A07</b>	1
Dissolved Nickel	ND	ug/L	50	12	EPA-6010B	ND	A07	1
Dissolved Selenium	ND	ug/L	500	75	EPA-6010B	ND	A07	1
Dissolved Silver	ND	ug/L	50	6.0	EPA-6010B	ND	A07	1
<b>Dissolved Strontium</b>	<b>7.8</b>	<b>mg/L</b>	<b>0.050</b>	<b>0.0050</b>	<b>EPA-6010B</b>	ND	<b>A07</b>	1
Dissolved Thallium	ND	ug/L	500	50	EPA-6010B	ND	A07	1
<b>Dissolved Uranium</b>	<b>1.2</b>	<b>pCi/L</b>	<b>3.4</b>	<b>0.18</b>	<b>EPA-200.8</b>	ND	<b>J,A07</b>	4
Dissolved Vanadium	ND	ug/L	50	11	EPA-6010B	ND	A07	1
<b>Dissolved Zinc</b>	<b>27</b>	<b>ug/L</b>	<b>50</b>	<b>25</b>	<b>EPA-6010B</b>	37	<b>J,A07</b>	1

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-6010B	01/13/15	01/14/15	12:35	ARD	PE-OP3	5	BYA0905
2	EPA-7196	01/08/15	01/08/15	09:59	TDC	KONE-1	1	BYA0624
3	EPA-7470A	01/15/15	01/16/15	08:23	MEV	CETAC1	1	BYA1237
4	EPA-200.8	01/13/15	01/14/15	23:34	SRM	PE-EL2	5	BYA0956

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

## Volatile Organic Analysis (EPA Method 8260B)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BYA0760</b>						
Benzene	BYA0760-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYA0760-BLK1	ND	ug/L	0.50	0.098	
Toluene	BYA0760-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYA0760-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYA0760-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYA0760-BLK1	ND	ug/L	0.50	0.082	
<b>1,2-Dichloroethane-d4 (Surrogate)</b>	<b>BYA0760-BLK1</b>	<b>111</b>	<b>%</b>	<b>75 - 125 (LCL - UCL)</b>		
<b>Toluene-d8 (Surrogate)</b>	<b>BYA0760-BLK1</b>	<b>97.0</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		
<b>4-Bromofluorobenzene (Surrogate)</b>	<b>BYA0760-BLK1</b>	<b>97.1</b>	<b>%</b>	<b>80 - 120 (LCL - UCL)</b>		

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Linn Energy-Hill Property  
18271 Highway 33  
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**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

## Volatile Organic Analysis (EPA Method 8260B)

### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab	Quals
								Percent Recovery	RPD		
<b>QC Batch ID: BYA0760</b>											
Benzene	BYA0760-BS1	LCS	25.970	25.000	ug/L	104		70 - 130			
Toluene	BYA0760-BS1	LCS	24.670	25.000	ug/L	98.7		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	BYA0760-BS1	LCS	11.260	10.000	ug/L	113		75 - 125			
Toluene-d8 (Surrogate)	BYA0760-BS1	LCS	10.180	10.000	ug/L	102		80 - 120			
4-Bromofluorobenzene (Surrogate)	BYA0760-BS1	LCS	9.4900	10.000	ug/L	94.9		80 - 120			

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

## Volatile Organic Analysis (EPA Method 8260B)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: BYA0760</b>		Used client sample: N								
Benzene	MS	1500068-01	ND	29.030	25.000	ug/L		116		70 - 130
	MSD	1500068-01	ND	28.600	25.000	ug/L	1.5	114	20	70 - 130
Toluene	MS	1500068-01	ND	28.990	25.000	ug/L		116		70 - 130
	MSD	1500068-01	ND	30.110	25.000	ug/L	3.8	120	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1500068-01	ND	10.540	10.000	ug/L		105		75 - 125
	MSD	1500068-01	ND	9.8000	10.000	ug/L	7.3	98.0		75 - 125
Toluene-d8 (Surrogate)	MS	1500068-01	ND	10.380	10.000	ug/L		104		80 - 120
	MSD	1500068-01	ND	10.170	10.000	ug/L	2.0	102		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1500068-01	ND	9.8500	10.000	ug/L		98.5		80 - 120
	MSD	1500068-01	ND	9.1300	10.000	ug/L	7.6	91.3		80 - 120

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**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

## Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BYA0793</b>						
Acenaphthene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Acenaphthylene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Anthracene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Benzo[a]anthracene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Benzo[b]fluoranthene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Benzo[k]fluoranthene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Benzo[a]pyrene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Benzo[g,h,i]perylene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Chrysene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Dibenzo[a,h]anthracene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Fluoranthene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Fluorene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Indeno[1,2,3-cd]pyrene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Naphthalene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Phenanthrene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
Pyrene	BYA0793-BLK1	ND	ug/L	0.10	0.034	
<b>Nitrobenzene-d5 (Surrogate)</b>	<b>BYA0793-BLK1</b>	<b>84.2</b>	<b>%</b>	<b>42 - 130 (LCL - UCL)</b>		
<b>2-Fluorobiphenyl (Surrogate)</b>	<b>BYA0793-BLK1</b>	<b>82.8</b>	<b>%</b>	<b>50 - 116 (LCL - UCL)</b>		
<b>p-Terphenyl-d14 (Surrogate)</b>	<b>BYA0793-BLK1</b>	<b>79.5</b>	<b>%</b>	<b>43 - 134 (LCL - UCL)</b>		

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Linn Energy-Hill Property  
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Reported: 01/28/2015 16:40  
Project: SB4  
Project Number: [none]  
Project Manager: Brian Smith

### Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: BYA0793</b>										
Acenaphthene	BYA0793-BS1	LCS	0.64941	1.0000	ug/L	64.9		60	110	
Acenaphthylene	BYA0793-BS1	LCS	0.72210	1.0000	ug/L	72.2		56	120	
Anthracene	BYA0793-BS1	LCS	0.82181	1.0000	ug/L	82.2		57	128	
Benzo[a]anthracene	BYA0793-BS1	LCS	0.79639	1.0000	ug/L	79.6		64	130	
Benzo[b]fluoranthene	BYA0793-BS1	LCS	1.0054	1.0000	ug/L	101		50	130	
Benzo[k]fluoranthene	BYA0793-BS1	LCS	0.80223	1.0000	ug/L	80.2		60	120	
Benzo[a]pyrene	BYA0793-BS1	LCS	0.94568	1.0000	ug/L	94.6		60	125	
Benzo[g,h,i]perylene	BYA0793-BS1	LCS	0.46995	1.0000	ug/L	47.0		44	120	
Chrysene	BYA0793-BS1	LCS	0.64450	1.0000	ug/L	64.4		60	110	
Dibenzo[a,h]anthracene	BYA0793-BS1	LCS	0.65181	1.0000	ug/L	65.2		40	120	
Fluoranthene	BYA0793-BS1	LCS	0.68254	1.0000	ug/L	68.3		60	120	
Fluorene	BYA0793-BS1	LCS	0.65829	1.0000	ug/L	65.8		60	120	
Indeno[1,2,3-cd]pyrene	BYA0793-BS1	LCS	0.58272	1.0000	ug/L	58.3		40	130	
Naphthalene	BYA0793-BS1	LCS	0.62532	1.0000	ug/L	62.5		60	110	
Phenanthrene	BYA0793-BS1	LCS	0.63463	1.0000	ug/L	63.5		60	120	
Pyrene	BYA0793-BS1	LCS	0.58687	1.0000	ug/L	58.7		50	125	
Nitrobenzene-d5 (Surrogate)	BYA0793-BS1	LCS	2.5394	4.0000	ug/L	63.5		42	130	
2-Fluorobiphenyl (Surrogate)	BYA0793-BS1	LCS	2.5476	4.0000	ug/L	63.7		50	116	
p-Terphenyl-d14 (Surrogate)	BYA0793-BS1	LCS	2.1996	4.0000	ug/L	55.0		43	134	

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18271 Highway 33  
McKittrick, CA 93251

Reported: 01/28/2015 16:40  
Project: SB4  
Project Number: [none]  
Project Manager: Brian Smith

### Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: BYA0793</b>		Used client sample: N								
Acenaphthene	MS	1428224-32	ND	0.83443	1.0000	ug/L		83.4	61 - 110	
	MSD	1428224-32	ND	0.95410	1.0000	ug/L	13.4	95.4	30	61 - 110
Acenaphthylene	MS	1428224-32	ND	0.93370	1.0000	ug/L		93.4	60 - 120	
	MSD	1428224-32	ND	1.0672	1.0000	ug/L	13.3	107	30	60 - 120
<b>Anthracene</b>	MS	<b>1428224-32</b>	<b>ND</b>	<b>1.0540</b>	<b>1.0000</b>	<b>ug/L</b>		<b>105</b>	<b>61 - 120</b>	
	MSD	<b>1428224-32</b>	<b>ND</b>	<b>1.2207</b>	<b>1.0000</b>	<b>ug/L</b>	<b>14.7</b>	<b>122</b>	<b>30</b>	<b>61 - 120</b>
Benzo[a]anthracene	MS	1428224-32	ND	0.97409	1.0000	ug/L		97.4	56 - 121	
	MSD	1428224-32	ND	1.1674	1.0000	ug/L	18.1	117	30	56 - 121
<b>Benzo[b]fluoranthene</b>	MS	<b>1428224-32</b>	<b>ND</b>	<b>1.1663</b>	<b>1.0000</b>	<b>ug/L</b>		<b>117</b>	<b>50 - 130</b>	
	MSD	<b>1428224-32</b>	<b>ND</b>	<b>1.3436</b>	<b>1.0000</b>	<b>ug/L</b>	<b>14.1</b>	<b>134</b>	<b>30</b>	<b>50 - 130</b>
Benzo[k]fluoranthene	MS	1428224-32	ND	1.0990	1.0000	ug/L		110	60 - 120	
	MSD	1428224-32	ND	1.1392	1.0000	ug/L	3.6	114	30	60 - 120
<b>Benzo[a]pyrene</b>	MS	<b>1428224-32</b>	<b>ND</b>	<b>1.1670</b>	<b>1.0000</b>	<b>ug/L</b>		<b>117</b>	<b>60 - 120</b>	
	MSD	<b>1428224-32</b>	<b>ND</b>	<b>1.2277</b>	<b>1.0000</b>	<b>ug/L</b>	<b>5.1</b>	<b>123</b>	<b>30</b>	<b>60 - 120</b>
Benzo[g,h,i]perylene	MS	1428224-32	ND	0.56491	1.0000	ug/L		56.5	45 - 120	
	MSD	1428224-32	ND	0.66454	1.0000	ug/L	16.2	66.5	30	45 - 120
Chrysene	MS	1428224-32	ND	0.80038	1.0000	ug/L		80.0	60 - 110	
	MSD	1428224-32	ND	0.95570	1.0000	ug/L	17.7	95.6	30	60 - 110
Dibenzo[a,h]anthracene	MS	1428224-32	ND	0.73927	1.0000	ug/L		73.9	40 - 120	
	MSD	1428224-32	ND	0.85134	1.0000	ug/L	14.1	85.1	30	40 - 120
Fluoranthene	MS	1428224-32	ND	0.86516	1.0000	ug/L		86.5	60 - 120	
	MSD	1428224-32	ND	1.0730	1.0000	ug/L	21.4	107	30	60 - 120
Fluorene	MS	1428224-32	ND	0.86131	1.0000	ug/L		86.1	60 - 120	
	MSD	1428224-32	ND	1.0074	1.0000	ug/L	15.6	101	30	60 - 120
Indeno[1,2,3-cd]pyrene	MS	1428224-32	ND	0.73281	1.0000	ug/L		73.3	40 - 130	
	MSD	1428224-32	ND	0.81151	1.0000	ug/L	10.2	81.2	30	40 - 130
Naphthalene	MS	1428224-32	ND	0.80609	1.0000	ug/L		80.6	60 - 110	
	MSD	1428224-32	ND	0.92670	1.0000	ug/L	13.9	92.7	30	60 - 110
Phenanthrene	MS	1428224-32	ND	0.82116	1.0000	ug/L		82.1	60 - 120	
	MSD	1428224-32	ND	0.94034	1.0000	ug/L	13.5	94.0	30	60 - 120
Pyrene	MS	1428224-32	ND	0.77065	1.0000	ug/L		77.1	50 - 125	
	MSD	1428224-32	ND	0.94459	1.0000	ug/L	20.3	94.5	30	50 - 125
Nitrobenzene-d5 (Surrogate)	MS	1428224-32	ND	3.3163	4.0000	ug/L		82.9	42 - 130	
	MSD	1428224-32	ND	3.7876	4.0000	ug/L	13.3	94.7		42 - 130
2-Fluorobiphenyl (Surrogate)	MS	1428224-32	ND	3.2457	4.0000	ug/L		81.1	50 - 116	
	MSD	1428224-32	ND	3.6637	4.0000	ug/L	12.1	91.6		50 - 116

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

## Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
									RPD	Percent Recovery	
<b>QC Batch ID: BYA0793</b>		Used client sample: N									
p-Terphenyl-d14 (Surrogate)	MS	1428224-32	ND	2.9306	4.0000	ug/L		73.3		43 - 134	
	MSD	1428224-32	ND	3.5864	4.0000	ug/L	20.1	89.7		43 - 134	

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

## Gas Testing in Water

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BYA0559</b>						
Methane	BYA0559-BLK1	ND	mg/L	0.0010	0.00035	

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Gas Testing in Water

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
<b>QC Batch ID: BYA0559</b>										
Methane	BYA0559-BS1	LCS	0.010875	0.010843	mg/L	100		80 - 120		
	BYA0559-BSD1	LCSD	0.011141	0.010843	mg/L	103	2.4	80 - 120		20

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Water Analysis (General Chemistry)

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BYA0564</b>						
Bromide	BYA0564-BLK1	ND	mg/L	0.10	0.035	
Chloride	BYA0564-BLK1	ND	mg/L	0.50	0.061	
Fluoride	BYA0564-BLK1	ND	mg/L	0.050	0.012	
Nitrate as NO3	BYA0564-BLK1	ND	mg/L	0.44	0.078	
Sulfate	BYA0564-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: BYA0782</b>						
Bicarbonate Alkalinity as CaCO3	BYA0782-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BYA0782-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	BYA0782-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BYA0782-BLK1	ND	mg/L	4.1	4.1	
<b>QC Batch ID: BYA0905</b>						
Dissolved Calcium	BYA0905-BLK1	0.047680	mg/L	0.10	0.016	J
Dissolved Magnesium	BYA0905-BLK1	ND	mg/L	0.050	0.019	
Dissolved Sodium	BYA0905-BLK1	ND	mg/L	0.50	0.051	
Dissolved Potassium	BYA0905-BLK1	ND	mg/L	1.0	0.10	
<b>QC Batch ID: BYA0913</b>						
Total Dissolved Solids @ 180 C	BYA0913-BLK1	ND	mg/L	6.7	6.7	

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Water Analysis (General Chemistry)

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: BYA0564</b>										
Bromide	BYA0564-BS1	LCS	2.0990	2.0000	mg/L	105		90 - 110		
Chloride	BYA0564-BS1	LCS	51.392	50.000	mg/L	103		90 - 110		
Fluoride	BYA0564-BS1	LCS	0.91900	1.0000	mg/L	91.9		90 - 110		
Nitrate as NO3	BYA0564-BS1	LCS	20.961	22.134	mg/L	94.7		90 - 110		
Sulfate	BYA0564-BS1	LCS	101.77	100.00	mg/L	102		90 - 110		
<b>QC Batch ID: BYA0782</b>										
Total Alkalinity as CaCO3	BYA0782-BS3	LCS	97.060	100.00	mg/L	97.1		90 - 110		
<b>QC Batch ID: BYA0905</b>										
Dissolved Calcium	BYA0905-BS1	LCS	10.410	10.000	mg/L	104		85 - 115		
Dissolved Magnesium	BYA0905-BS1	LCS	10.833	10.000	mg/L	108		85 - 115		
Dissolved Sodium	BYA0905-BS1	LCS	10.802	10.000	mg/L	108		85 - 115		
Dissolved Potassium	BYA0905-BS1	LCS	10.784	10.000	mg/L	108		85 - 115		
<b>QC Batch ID: BYA0913</b>										
Total Dissolved Solids @ 180 C	BYA0913-BS1	LCS	570.00	586.00	mg/L	97.3		90 - 110		

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Linn Energy-Hill Property
18271 Highway 33
McKittrick, CA 93251

Reported: 01/28/2015 16:40
Project: SB4
Project Number: [none]
Project Manager: Brian Smith

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Qualls. Includes sections for QC Batch ID: BYA0564, BYA0782, BYA0905, and BYA0913.

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

Reported: 01/28/2015 16:40  
Project: SB4  
Project Number: [none]  
Project Manager: Brian Smith

### Metals Analysis

#### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BYA0624</b>						
Hexavalent Chromium	BYA0624-BLK1	ND	ug/L	2.0	0.70	
<b>QC Batch ID: BYA0905</b>						
Dissolved Antimony	BYA0905-BLK1	ND	ug/L	100	4.9	
Dissolved Arsenic	BYA0905-BLK1	ND	ug/L	50	9.2	
Dissolved Barium	BYA0905-BLK1	ND	ug/L	10	3.5	
Dissolved Beryllium	BYA0905-BLK1	ND	ug/L	10	0.50	
<b>Dissolved Boron</b>	<b>BYA0905-BLK1</b>	<b>0.033929</b>	<b>mg/L</b>	<b>0.10</b>	<b>0.010</b>	<b>J</b>
Dissolved Cadmium	BYA0905-BLK1	ND	ug/L	10	1.1	
Dissolved Chromium	BYA0905-BLK1	ND	ug/L	10	1.0	
Dissolved Cobalt	BYA0905-BLK1	ND	ug/L	50	1.1	
<b>Dissolved Copper</b>	<b>BYA0905-BLK1</b>	<b>3.2109</b>	<b>ug/L</b>	<b>10</b>	<b>1.0</b>	<b>J</b>
Dissolved Lead	BYA0905-BLK1	ND	ug/L	50	3.5	
Dissolved Lithium	BYA0905-BLK1	ND	mg/L	0.020	0.0062	
Dissolved Molybdenum	BYA0905-BLK1	ND	ug/L	50	1.4	
Dissolved Nickel	BYA0905-BLK1	ND	ug/L	10	2.4	
Dissolved Selenium	BYA0905-BLK1	ND	ug/L	100	15	
Dissolved Silver	BYA0905-BLK1	ND	ug/L	10	1.2	
Dissolved Strontium	BYA0905-BLK1	ND	mg/L	0.010	0.0010	
Dissolved Thallium	BYA0905-BLK1	ND	ug/L	100	10	
Dissolved Vanadium	BYA0905-BLK1	ND	ug/L	10	2.2	
<b>Dissolved Zinc</b>	<b>BYA0905-BLK1</b>	<b>7.4631</b>	<b>ug/L</b>	<b>10</b>	<b>5.0</b>	<b>J</b>
<b>QC Batch ID: BYA0956</b>						
Dissolved Uranium	BYA0956-BLK1	ND	pCi/L	0.67	0.035	
<b>QC Batch ID: BYA1237</b>						
Dissolved Mercury	BYA1237-BLK1	ND	ug/L	0.20	0.033	

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

### Metals Analysis

#### Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
<b>QC Batch ID: BYA0624</b>										
Hexavalent Chromium	BYA0624-BS1	LCS	50.363	50.000	ug/L	101		85 - 115		
<b>QC Batch ID: BYA0905</b>										
Dissolved Antimony	BYA0905-BS1	LCS	452.95	400.00	ug/L	113		85 - 115		
Dissolved Arsenic	BYA0905-BS1	LCS	225.27	200.00	ug/L	113		85 - 115		
Dissolved Barium	BYA0905-BS1	LCS	439.02	400.00	ug/L	110		85 - 115		
Dissolved Beryllium	BYA0905-BS1	LCS	205.14	200.00	ug/L	103		85 - 115		
Dissolved Boron	BYA0905-BS1	LCS	1.0681	1.0000	mg/L	107		85 - 115		
Dissolved Cadmium	BYA0905-BS1	LCS	218.02	200.00	ug/L	109		85 - 115		
Dissolved Chromium	BYA0905-BS1	LCS	212.92	200.00	ug/L	106		85 - 115		
Dissolved Cobalt	BYA0905-BS1	LCS	221.55	200.00	ug/L	111		85 - 115		
Dissolved Copper	BYA0905-BS1	LCS	401.43	400.00	ug/L	100		85 - 115		
Dissolved Lead	BYA0905-BS1	LCS	442.98	400.00	ug/L	111		85 - 115		
Dissolved Lithium	BYA0905-BS1	LCS	0.21872	0.20000	mg/L	109		85 - 115		
Dissolved Molybdenum	BYA0905-BS1	LCS	222.31	200.00	ug/L	111		85 - 115		
Dissolved Nickel	BYA0905-BS1	LCS	424.33	400.00	ug/L	106		85 - 115		
Dissolved Selenium	BYA0905-BS1	LCS	220.45	200.00	ug/L	110		85 - 115		
Dissolved Silver	BYA0905-BS1	LCS	102.28	100.00	ug/L	102		85 - 115		
Dissolved Strontium	BYA0905-BS1	LCS	0.56066	0.50000	mg/L	112		85 - 115		
Dissolved Thallium	BYA0905-BS1	LCS	452.19	400.00	ug/L	113		85 - 115		
Dissolved Vanadium	BYA0905-BS1	LCS	216.86	200.00	ug/L	108		85 - 115		
Dissolved Zinc	BYA0905-BS1	LCS	537.86	500.00	ug/L	108		85 - 115		
<b>QC Batch ID: BYA0956</b>										
Dissolved Uranium	BYA0956-BS1	LCS	26.285	26.800	pCi/L	98.1		85 - 115		
<b>QC Batch ID: BYA1237</b>										
Dissolved Mercury	BYA1237-BS1	LCS	1.0425	1.0000	ug/L	104		85 - 115		

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Linn Energy-Hill Property
18271 Highway 33
McKittrick, CA 93251

Reported: 01/28/2015 16:40
Project: SB4
Project Number: [none]
Project Manager: Brian Smith

Metals Analysis

Quality Control Report - Precision & Accuracy

Table with columns: Constituent, Source Type, Source Sample ID, Source Result, Result, Spike Added, Units, RPD, Percent Recovery, Control Limits RPD, Percent Recovery, Lab Quals. Includes QC Batch IDs BYA0624 and BYA0905.

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Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

Reported: 01/28/2015 16:40  
Project: SB4  
Project Number: [none]  
Project Manager: Brian Smith

### Metals Analysis

#### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab
								Percent Recovery	Percent Recovery	
<b>QC Batch ID: BYA0905</b>		Used client sample: N								
Dissolved Molybdenum	DUP	1500551-01	4.4673	4.7372		ug/L	5.9		20	J
	MS	1500551-01	4.4673	217.84	204.08	ug/L		105	75 - 125	
	MSD	1500551-01	4.4673	199.91	204.08	ug/L	8.6	95.8	20 75 - 125	
Dissolved Nickel	DUP	1500551-01	ND	ND		ug/L			20	
	MS	1500551-01	ND	391.70	408.16	ug/L		96.0	75 - 125	
	MSD	1500551-01	ND	372.74	408.16	ug/L	5.0	91.3	20 75 - 125	
Dissolved Selenium	DUP	1500551-01	ND	ND		ug/L			20	
	MS	1500551-01	ND	256.05	204.08	ug/L		125	75 - 125	
	MSD	1500551-01	ND	239.98	204.08	ug/L	6.5	118	20 75 - 125	
Dissolved Silver	DUP	1500551-01	ND	ND		ug/L			20	
	MS	1500551-01	ND	99.721	102.04	ug/L		97.7	75 - 125	
	MSD	1500551-01	ND	91.847	102.04	ug/L	8.2	90.0	20 75 - 125	
Dissolved Strontium	DUP	1500551-01	1.1639	1.3193		mg/L	12.5		20	
	MS	1500551-01	1.1639	1.7442	0.51020	mg/L		114	75 - 125	
	MSD	1500551-01	1.1639	1.6575	0.51020	mg/L	5.1	96.7	20 75 - 125	
Dissolved Thallium	DUP	1500551-01	ND	ND		ug/L			20	
	MS	1500551-01	ND	444.17	408.16	ug/L		109	75 - 125	
	MSD	1500551-01	ND	412.07	408.16	ug/L	7.5	101	20 75 - 125	
Dissolved Vanadium	DUP	1500551-01	ND	ND		ug/L			20	
	MS	1500551-01	ND	218.94	204.08	ug/L		107	75 - 125	
	MSD	1500551-01	ND	204.75	204.08	ug/L	6.7	100	20 75 - 125	
Dissolved Zinc	DUP	1500551-01	ND	ND		ug/L			20	
	MS	1500551-01	ND	504.54	510.20	ug/L		98.9	75 - 125	
	MSD	1500551-01	ND	475.70	510.20	ug/L	5.9	93.2	20 75 - 125	
<b>QC Batch ID: BYA0956</b>		Used client sample: N								
Dissolved Uranium	DUP	1500532-03	4.8742	4.8702		pCi/L	0.1		20	
	MS	1500532-03	4.8742	34.669	27.347	pCi/L		109	70 - 130	
	MSD	1500532-03	4.8742	34.825	27.347	pCi/L	0.4	110	20 70 - 130	
<b>QC Batch ID: BYA1237</b>		Used client sample: N								
Dissolved Mercury	DUP	1500899-01	ND	ND		ug/L			20	
	MS	1500899-01	ND	1.0425	1.0000	ug/L		104	70 - 130	
	MSD	1500899-01	ND	1.0300	1.0000	ug/L	1.2	103	20 70 - 130	

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BSK Associates Fresno  
1414 Stanislaus St  
Fresno, CA93706  
559-497-2888 (Main)  
559-485-6935 (FAX)

**A5A0714**  
**1/15/2015**  
Invoice: A501022

Kerrie Vaughan  
BC Laboratories  
4100 Atlas Court  
Bakersfield, CA 93308

**RE: Report for A5A0714 General: Project Manager-Kerrie Vaughan**

Dear Kerrie Vaughan,

Thank you for using BSK Associates for your analytical testing needs . In the following pages, you will find the test results for the samples submitted to our laboratory on 1/9/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty .

Sincerely,

Stephane Maupas, Project Manager

If additional clarification of any information is required, please contact your Project Manager, Stephane Maupas , at (800) 877-8310 or (559) 497-2888 x212.



Accredited in Accordance with NELAP  
ORELAP #4021

A5A0714 FINAL 01152015 1426  
Printed: 01/15/2015  
QA-RP-0001-10 Final.rpt

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Page 1 of 8



**A5A0714**

*General: Project Manager-Kerrie Vaughan*

**Case Narrative**

**Project and Report Details Invoice Details**

**Client:** BC Laboratories  
**Report To:** Kerrie Vaughan  
**Project #:** 1500555  
**Received:** 1/09/2015 - 15:30  
**Report Due:** 1/22/2015

**Invoice To:** BC Laboratories  
**Invoice Attn:** Kerrie Vaughan  
**Project PO#:** -

**Sample Receipt Conditions**

**Cooler:** Default Cooler  
**Temperature on Receipt °C:** 6.3

Containers Intact  
COC/Labels Agree  
Received On Wet Ice  
Packing Material - Bubble Wrap  
Sample(s) were received in temperature range.  
Initial receipt at BSK-FAL

**Data Qualifiers**

The following qualifiers have been applied to one or more analytical results:

\*\*\*None applied\*\*\*

**Report Distribution**

Recipient(s)	Report Format	CC:
Kerrie Vaughan	FINAL.RPT	



**A5A0714**

**General: Project Manager-Kerrie Vaughan**

1500555

**Certificate of Analysis**

Sample ID: A5A0714-01  
Sampled By: Client  
Sample Description: 1500555-01

Sample Date - Time: 01/07/15 - 09:15  
Matrix: Water  
Sample Type: Grab

**BSK Associates Fresno  
Radiological**

Analyte	Method	Result	Units	Batch	Prepared	Analyzed	Qual
Gross Alpha	EPA 00-02	ND	pCi/L	A500317	01/12/15	01/13/15	
1.65 Sigma Uncertainty		0.156	±				
MDA95		579	pCi/L				

A5A0714 FINAL 01152015 1426  
Printed: 01/15/2015  
QA-RP-0001-10 Final.rpt

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A5A0714

General: Project Manager-Kerrie Vaughan

BSK Associates Fresno Radiological Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
---------	--------	----	-------	-------------	---------------	------	-------------	-----	-----------	---------------	------

EPA 00-02 - Quality Control

Batch: A500317

Prepared: 01/12/2015

Prep Method: EPA 00-02

Analyst: SAB

Blank (A500317-BLK1)

1.65 Sigma Uncertainty	ND			±						01/13/15	
Gross Alpha	ND	3	pCi/L							01/13/15	
MDA95	ND	0.00	pCi/L							01/13/15	

Blank Spike (A500317-BS1)

Gross Alpha	30.1	3	pCi/L	30		100	80-120			01/13/15	
-------------	------	---	-------	----	--	-----	--------	--	--	----------	--

Blank Spike Dup (A500317-BSD1)

Gross Alpha	25.9	3	pCi/L	30		86	80-120	15	50	01/13/15	
-------------	------	---	-------	----	--	----	--------	----	----	----------	--

Matrix Spike (A500317-MS1), Source: A5A0163-01

Gross Alpha	104	3	pCi/L	120	ND	86	70-130			01/13/15	
-------------	-----	---	-------	-----	----	----	--------	--	--	----------	--

Matrix Spike (A500317-MS2), Source: A5A0468-04

Gross Alpha	107	3	pCi/L	120	ND	88	70-130			01/13/15	
-------------	-----	---	-------	-----	----	----	--------	--	--	----------	--

Matrix Spike Dup (A500317-MSD1), Source: A5A0163-01

Gross Alpha	113	3	pCi/L	120	ND	93	70-130	8	50	01/13/15	
-------------	-----	---	-------	-----	----	----	--------	---	----	----------	--

Matrix Spike Dup (A500317-MSD2), Source: A5A0468-04

Gross Alpha	107	3	pCi/L	120	ND	88	70-130	0	50	01/13/15	
-------------	-----	---	-------	-----	----	----	--------	---	----	----------	--

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**A5A0714**

**General: Project Manager-Kerrie Vaughan**

**Certificate of Analysis**

**Notes:**

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

**Definitions**

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

**BSK is not accredited under the NELAC program for the following parameters:                   \*\*NA\*\***

**Certifications:** Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

**Fresno**

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - ORELAP	4021
EPA - UCMR3	CA00079	State of Washington	C997-14

**Sacramento**

State of California - ELAP      2435

**Vancouver**

State of Oregon - ORELAP	WA100008	State of Washington	C824-13
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A5A0714

**01092015**



Turnaround: Standard

Due Date: 1/22/2015

BCLab4911



BC Laboratories





SUBCONTRACT ORDER  
BC Laboratories  
1500555

A5A0714 01/09/2015  
BCLab4911 9



6.3

**SENDING LABORATORY:**

BC Laboratories  
4100 Atlas Court  
Bakersfield, CA 93308  
Phone: 661-327-4911  
FAX: 661-327-1918  
Project Manager: Kerrie Vaughan

**RECEIVING LABORATORY:**

BSK Analytical Labs  
1414 Stanislaus Street  
Fresno, CA 93706  
Phone: (800) 877-8310  
FAX: (559) 485-6935

BSKSA

Analysis	Due	Expires	Comments
----------	-----	---------	----------

Sample ID: 1500555-01	Water	Sampled: 01/07/15 09:15	
EPA 900.0 Gross Alpha	01/21/15 17:00	07/07/15 09:15	Analyze water phase only. Results needed by 1/21/2015.

Containers supplied:

	1/9/15		1-9-15
Released By	Date	Received By	Date
	1-9-15		1-9-15 1530
Released By	Date	Received By	Date

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BSK Associates SR-FL-0002-12

A5A0714

01/09/2015

BCLab4911

9

Sample Integrity



BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$	Yes	No	NA	Were correct containers and preservatives received for the tests requested?	Yes	No	NA
	If samples were taken today, is there evidence that chilling has begun?	Yes	No	NA	Were there bubbles in the VOA vials? (Volatiles Only)	Yes	No	NA
	Did all bottles arrive unbroken and intact?	Yes	No		Was a sufficient amount of sample received?	Yes	No	
	Did all bottle labels agree with COC?	Yes	No		Do samples have a hold time $< 72$ hours?	Yes	No	NA
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes	No	NA	Was PM notified of discrepancies? PM: By/Time	Yes	No	NA
Bottles Received <small>means preservation/chlorine checks are either N/A or are performed in the lab</small>	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?					
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$	—	—					
	None (P) <sup>White Cap</sup>	—	—					
	Cr6 (P) <sup>Br Green Label</sup> $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW	pH $> 8$	Y	N				
	Cr6 (P) <sup>Pink Label</sup> Hex Chrome Buffer DW	pH 9-9.5	Y	N				
	Cr6 (P) <sup>Pink Label</sup> Hex Chrome Buffer WW	pH 9.3-9.7	Y	N				
	$\text{HNO}_3$ (P) <sup>Red Cap</sup>	—	—		IC			
	$\text{H}_2\text{SO}_4$ (P) or (AG) <sup>Yellow Cap/Label</sup>	pH $< 2$	Y	N				
	$\text{NaOH}$ (P) <sup>Green Cap</sup>	Cl, pH $> 10$	Y	N				
	$\text{NaOH} + \text{ZnAc}$ (P)	pH $> 9$	Y	N				
	Dissolved Oxygen 300ml (g)	—	—					
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—					
	$\text{HCl}$ (AG) <sup>Lt Blue Label</sup> O&G, Diesel	—	—					
	$\text{Na}_2\text{O}_3\text{S} + \text{HCl}$ (AG) <sup>Lt Pink Label</sup> 525	—	—					
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549	—	—					
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) <sup>Blue Label</sup> 547,515,548,THM,524	—	—					
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) <sup>Blue Label</sup> 504, 505	—	—					
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) <sup>Orange Label</sup> 531	pH $< 3$	Y	N				
	$\text{NH}_4\text{Cl}$ (AG) <sup>Purple Label</sup> 552	—	—					
	EDA (AG) <sup>Brown Label</sup> DBPs	—	—					
	HCL (CG) 524 2.BTEX,Gas, MTBE, 8260/624	—	—					
	Buffer pH 4 (CG)	—	—					
	None (CG)	—	—					
	$\text{H}_3\text{PO}_4$ (CG) <sup>Salmon Label</sup>	—	—					
	Other:							
Asbestos 1Liter Plastic w/ Foil	—	—						
Low Level Hg / Metals Double Baggie	—	—						
Bottled Water	—	—						
Clear Glass Jar: 250 / 500 / 1 Liter	—	—						
Soil Tube Brass / Steel / Plastic	—	—						
Tedlar Bag / Plastic Bag	—	—						
Split	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials	
	S (P) 1L (P)	$\text{HNO}_3$	1-9-15 1575 NP	S P				
Comments								

Labeled by: NP @ 1/6/15 Labels checked by: JH @ 1/6/20 RUSH Paged by: @ Page 8 of 8



LA Testing

520 Mission Street South Pasadena, CA 91030
Phone/Fax: (323) 254-9960 / (323) 254-9982
http://www.LATesting.com / pasadenalab@lateesting.com

LA Testing Order ID: 321500746
Customer ID: BCLA50
Customer PO:
Project ID:

Attn: Kerri Vaughn
BC Laboratories, Inc.
4100 ATLAS COURT
Bakersfield, CA 93308
Phone: (661) 327-4911
Fax: (661) 327-1918
Collected: 01/07/2015
Received: 01/13/2015
Analyzed: 01/27/2015
Proj: 1500555

Test Report: Determination of Asbestos Structures >10µm in Drinking Water
Performed by the 100.2 Method (EPA 600/R-94/134)

Table with columns: Sample ID, Client / EMSL, Sample Filtration Date/Time, Original Sample Vol. Filtered (ml), Effective Filter Area (mm²), Area Analyzed (mm²), Asbestos Types, Fibers Detected, Analytical Sensitivity, Concentration (MFL), Confidence Limits. Row 1: 1500555-01, 1/21/2015 05:45 PM, 5, 1288, 0.2640, None Detected, ND, 0.98, <0.98, 0.00 - 3.60

Sample received past 48 hour hold time. UV Ozonated. Analytical sensitivity could not be meet due to the excessive particulates.

Analyst(s)
Sherrie Ahmad (1)

Jerry Drapala Ph.D, Laboratory Manager
or Other Approved Signatory

Any questions please contact Jerry Drapala.

Initial report from: 01/27/2015 12:36:28

Sample collection and containers provided by the client, acceptable bottle blank level is defined as ≤0.01MFL>10µm. ND=None Detected. This report relates only to those items tested. This report may not be reproduced, except in full, without written permission by LA Testing. Samples received in good condition unless otherwise noted.
Samples analyzed by LA Testing South Pasadena, CA CA ELAP 2283



Pace Analytical Services, Inc.  
1638 Roseytown Road - Suites 2,3,4  
Greensburg, PA 15601  
(724)850-5600

January 28, 2015

Ms. Kerrie Vaughan  
BC Laboratories  
4100 Atlas Ct.  
Bakersfield, CA 93308

RE: Project: 1500555  
Pace Project No.: 30138787

Dear Ms. Vaughan:  
Enclosed are the analytical results for sample(s) received by the laboratory on January 15, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carin Ferris  
carin.ferris@pacelabs.com  
Project Manager

Enclosures



**REPORT OF LABORATORY ANALYSIS**

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(724)850-5600

**CERTIFICATIONS**

Project: 1500555  
Pace Project No.: 30138787

**Pennsylvania Certification IDs**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ACCLASS DOD-ELAP Accreditation #: ADE-1544  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California/TNI Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH-0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Guam/PADEP Certification  
Hawaii/PADEP Certification  
Idaho Certification  
Illinois/PADEP Certification  
Indiana/PADEP Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana DHH/TNI Certification #: LA140008  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: PA00091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification  
Missouri Certification #: 235

Montana Certification #: Cert 0082  
Nebraska Certification #: NE-05-29-14  
Nevada Certification  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188  
Utah/TNI Certification #: PA014572014-4  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 460198  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin/PADEP Certification  
Wyoming Certification #: 8TMS-Q

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**SAMPLE SUMMARY**

Project: 1500555  
Pace Project No.: 30138787

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30138787001	1500555-01	Water	01/07/15 09:15	01/15/15 09:50

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**SAMPLE ANALYTE COUNT**

Project: 1500555  
Pace Project No.: 30138787

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30138787001	1500555-01	EPA 903.1	JC2	1
		EPA 904.0	JLW	1

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Greensburg, PA 15601  
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**PROJECT NARRATIVE**

Project: 1500555  
Pace Project No.: 30138787

Date: January 28, 2015

**1500555-01 (Lab ID: 30138787001)**

- Upon receipt at the laboratory, 6 mls of nitric acid were added to the samples to meet the sample preservation requirement of pH <2 for radiological analyses.

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**PROJECT NARRATIVE**

Project: 1500555  
Pace Project No.: 30138787

**Method:** EPA 903.1  
**Description:** 903.1 Radium 226  
**Client:** BC Laboratories  
**Date:** January 28, 2015

**General Information:**

1 sample was analyzed for EPA 903.1. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

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**PROJECT NARRATIVE**

Project: 1500555  
Pace Project No.: 30138787

**Method:** EPA 904.0  
**Description:** 904.0 Radium 228  
**Client:** BC Laboratories  
**Date:** January 28, 2015

**General Information:**

1 sample was analyzed for EPA 904.0. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

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Greensburg, PA 15601  
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**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 1500555  
Pace Project No.: 30138787

Sample: 1500555-01 Lab ID: 30138787001 Collected: 01/07/15 09:15 Received: 01/15/15 09:50 Matrix: Water  
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 6 mls of nitric acid were added to the samples to meet the sample preservation requirement of pH <2 for radiological analyses.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	3.49 ± 5.25 (7.45) C:NA T:95%	pCi/L	01/26/15 09:56	13982-63-3	
Radium-228	EPA 904.0	5.03 ± 4.11 (8.19) C:84% T:83%	pCi/L	01/26/15 17:04	15262-20-1	

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: 1500555  
Pace Project No.: 30138787

QC Batch: RADC/23066	Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1	Analysis Description: 903.1 Radium-226
Associated Lab Samples: 30138787001	

METHOD BLANK: 844562	Matrix: Water
Associated Lab Samples: 30138787001	

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0749 ± 0.441 (0.900) C:NA T:89%	pCi/L	01/26/15 09:30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: 1500555  
Pace Project No.: 30138787

QC Batch: RADC/23101 Analysis Method: EPA 904.0  
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228  
Associated Lab Samples: 30138787001

METHOD BLANK: 845508 Matrix: Water  
Associated Lab Samples: 30138787001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0176 ± 0.266 (0.614) C:88% T:92%	pCi/L	01/26/15 17:04	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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(724)850-5600

**QUALIFIERS**

Project: 1500555  
Pace Project No.: 30138787

**DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.  
ND - Not Detected at or above adjusted reporting limit.  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.  
Act - Activity  
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).  
Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)  
(MDC) - Minimum Detectable Concentration  
Trac - Tracer Recovery (%)  
Carr - Carrier Recovery (%)  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

**REPORT OF LABORATORY ANALYSIS**

Date: 01/28/2015 02:07 PM

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**SUBCONTRACT ORDER**

**BC Laboratories**

**1500555**

30138787 PACEA

**SENDING LABORATORY:**

BC Laboratories  
4100 Atlas Court  
Bakersfield, CA 93308  
Phone: 661-327-4911  
FAX: 661-327-1918  
Project Manager: Kerrie Vaughan

**RECEIVING LABORATORY:**

PACE Analytical  
1638 Roseytown Road, Ste 2,3 &4  
Greensburg, PA 15601  
Phone: (724) 850-5600  
FAX: (724) 850-5601

Analysis	Due	Expires	Comments
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<b>Sample ID: 1500555-01</b>	<b>Water</b>	<b>Sampled: 01/07/15 09:15</b>	
EPA 903.1 - Radium 226	01/21/15 17:00	07/07/15 09:15	Analyze water phase only. Results needed by 1/21/2015.
EPA 904.0 - Radium 228	01/21/15 17:00	07/07/15 09:15	Analyze water phase only. Results needed by 1/21/2015.

Containers supplied:

	1915		1/15/15	0958
Released By	Date	Received By	Date	

Released By	Date	Received By	Date

**PACEA**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.



Sample Condition Upon Receipt

30138787



Client Name: BC Project #

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 1Z 96S 376 03 619 2578

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: Ann 1/15/15

Table with 16 rows of sample condition checks (Chain of Custody, Containers, Labels, etc.) with Yes/No/N/A checkboxes and handwritten notes.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 1/19/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)





Linn Energy-Hill Property  
18271 Highway 33  
McKittrick, CA 93251

**Reported:** 01/28/2015 16:40  
**Project:** SB4  
**Project Number:** [none]  
**Project Manager:** Brian Smith

**Notes And Definitions**

- J Estimated Value (CLP Flag)
- MDL Method Detection Limit
- ND Analyte Not Detected at or above the reporting limit
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference
- A01 PQL's and MDL's are raised due to sample dilution.
- A03 The sample concentration is more than 4 times the spike level.
- A07 PQL's were raised due to sample dilution caused by high analyte concentration or matrix interference.
- Q03 Matrix spike recovery(s) is(are) not within the control limits.
- Z1 50uL of antifoamer solution added to sample VOA